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January 1, 1973 - March 31, 1973

Contract Number NASW-2379

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Southeastern State College

Durant, Oklahoma

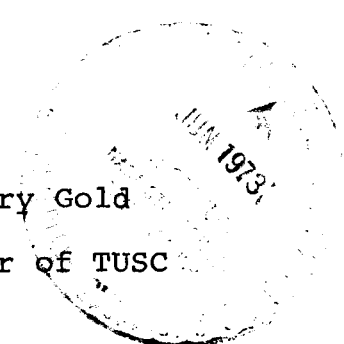
Leon Hibbs

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Chairman of TUSC

C. Henry Gold

Director of TUSC



TECHNOLOGY USE STUDIES CENTER

SOUTHEASTERN STATE COLLEGE
DURANT, OKLAHOMA 74701

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By
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April 1973

TECHNOLOGY USE STUDIES CENTER
Southeastern State College
Durant, Oklahoma 74701

PREFACE

The time span involved in this Technology Utilization Report is January 1, 1973 - March 31, 1973; it is a record of TUSC's accomplishments for the third quarter of the contract year, and it is the Thirty-second Quarterly Status Report.

TUSC personnel who provided the input of information leading to preparation of the report were: A. M. Moore, Senior Industrial Specialist; Bill Dodd, Industrial Specialist; Bob Frederick, Dan Gandy, Brent Martin, and Bennie Oulds, Information Retrieval Assistants; Veleta Coleman, Brenda Futrell, Kathy Hayes, Judy Moseley, and Kay Parker, Clerical Assistants; Velma Dittmar, Administrative Assistant; and C. Henry Gold, Director.

C. Henry Gold

April 1973

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SUMMARY

Information that concerns statistical data, for the reporting period, is included in Appendix A. It is most encouraging to TUSC personnel to note that technology utilization interests and the dissemination of it has not only bypassed our previously stated workload expectations, but the TU effort during the quarter equals the "high water mark" of any previous achievement--75 searches were completed.

In comparison with the corresponding quarter one year ago (reference QSR #28), the 1973 TU effort of TUSC represents an increase of approximately 20% in terms of searches processed. A factor that affects the optimistic view expressed above is the fact that this high-level accomplishment occurred during the reporting period in which "Spring Break" falls--meaning, of course, that our Information Retrieval Assistants (students) were not here for a week, as well as other campus personnel with whom TUSC coordinates its efforts.

The heating system modification/installation in the building where TUSC is located reduced our workload capacity as reported in QSR #31. This is the conclusion that was made when it was noted that 30 searches were on hand but not processed at the time QSR #31 was published. Also, there are 20 searches that are either "in process" or have been disseminated while formulating this report (these are not included in this report.)

As a staff assistance service, TUSC provided information and duplication service relative to the OSHA training program mentioned in QSR #30.

TUSC also provided administrative assistance and research effort in acquiring information and expertise concerning the Equal Employment Opportunity Act, Equal Pay Act, Age Discrimination in Employment Act, Civil Rights Acts, Executive Orders and other Federal Statistics pertinent thereto especially where public institutions are concerned.

SPECIFIC REPORT RELATING TO STATEMENT
OF WORK IN NASW-2379

Contract NASW-2379 sets forth specific items of work-- Article I is the Contractor's (TUSC) Program of Work and Article VIII provides for various reports such as this one. Selected transfer and/or impact reports are included in Appendix B. The following is a report of accomplishments that relate to the statement of contract work performance.

Dissemination and Assistance

Transfers

Transfer 162--This transfer concerns technology utilization in connection with the "fish farm" at Whitewright, Texas.

A staff member of the National Science Foundation (NSF), who has a personal interest in the overall ramifications of TU efforts (he is a former NASA employee), visited with TUSC about the time Mr. Tom Gillett had been advised by his doctor to sell the facility (ref. page 1, QSR #31). The NSF representative is acquainted with a person who has a natural interest in such an enterprise; consequently, TUSC should shortly be in a position to report a "transfer" of this transfer through Cooperation with Other Agencies. TUSC has introduced the prospective buyer to one of the College's fish

biologists who is rendering assistance in water analysis, fish productivity, management, etc., merely as a community service.

Transfer 163--This transfer concerns the radio telescope construction using information from various TU publications. It continues to be utilized by the Physical Sciences Department of Southeastern State College.

Transfer 164--This transfer has the potential of being one of the most significant in terms of effectiveness and application. The transfer concerns electronic information that TUSC has forwarded to the Skyline Career Development Center in Dallas, Texas. The information request was generated by an Electronics Instructor who was formerly a TUSC Information Retrieval Assistant. He cites the latest (up-to-date) NASA Tech Briefs and several SP's as being "keyed" to the school curriculum that affects one-hundred forty students. The students will design and construct various electronic components related to projects to be entered in local, state, and national Vocational Industrial Clubs of America (VICA) contests. Correspondence about this transfer is included in Appendix B.

Transfer 165--This transfer of information came about as the result of an SBA client query. There was a need for state-of-the-art information concerning small size ozone generators and their use for water purification. The SBA client's letter is included in Appendix B and provides a source for excellent testimony as to the government-sponsored research and availability of it through various dissemination services.

Transfer 166--This is another information transfer accomplished via the SBA concerning electronic security. The client, Mr. Arthur E. Judd, President, D-Co-Inc., gives special credit to our national TU program and confirms a long-standing position of TUSC; i.e., data bank information and the need for information contained therein are two separate entities. Mr. Judd stated, "We feel certain that the technology utilization program is beneficial over the short term but believe that the real effectiveness of the program can only be truly evaluated over the long pull."

Transfer 167--The Gruber R & D Company, another SBA client, plans to use TU information in development of future products for the company. Requested information concerns fire or smoke type sensors and seismic intrusion detectors. TUSC is pleased to note that a majority of information disseminated by the SBA was information that TUSC Information Retrieval Assistants were able to retrieve from the NASA TU data bank.

Correspondence which provides documentation for these transfers are arranged chronologically in Appendix B.

Searches and/or Assistance

Search 796--Transfer 164 mentioned above resulted from this search which was reported in QSR #30.

Searches 808 and 809--Transfer 165, also included in QSR #30, resulted in part from these searches; see correspondence in Appendix B.

Searches 817 and 818--Transfer 166 resulted from these searches which are recorded in QSR #30 and Search 845 in QSR #31.

Search 846--Transfer 167 was the result of this search that was reported last quarter, QSR #31, and Searches 819 and 820 as reported in QSR #30.

Searches 893, 898, and 909--These searches were accomplished to support requests from biological science personnel who are cooperating with Durant City officials in a plan for reclaiming sewage and/or other polluted water. The plan is to construct and utilize earthen lagoons for the water purification process, using "nature's" ecology system; i.e., aquatic plant life, crustaceans, higher vertebrates, and other forms of lower aquatic animals will be utilized in the water purification system. Due to an extremely "wet" winter and spring, there has been a delay in construction of the holding lagoons--the soil has been simply too moist for effective use of heavy machinery.

Search 906--This was a search from the SBA that was initiated by Testronic Development Laboratory. Thirty-five pertinent NASA documents were forwarded.

Search 912--Data bank information, concerning hypertension, was made available to the Oklahoma State Department of Health. The Department's Staff Assistant's letter of appreciation and draft copy of a Hypertension Clinic Manual developed from TU material are included in Appendix B.

Search 915--Local representatives of the Department of Labor are developing a project for retired citizens; i.e., Retired Senior Volunteer Program (RSVP). The purpose of it is to involve senior citizens in the affairs of the community in a meaningful, recognized role thereby providing a significant and useful life during the "retirement years" by utilization of the volunteer services of these highly capable people. Thirty-six reports were retrieved that have a bearing upon the human aging process.

Search 916--The search was initiated by a representative of the Food and Drug Administration, and it concerns a more effective way of inspecting canned food. As an item of national involvement, it is a good research topic. We sent the SP on Non-destructive Testing and appropriate abstracts on thermocouples, but we do not feel that the TUSC search provided information that is completely satisfactory to the need of the FDA--it is a unique question, and data bank information cannot be retrieved in the specifics of the question. However, TUSC is confident that an inspection procedure could be developed by those specialists having the know-how or expertise in electronics and an understanding of the problem.

Searches 923, 924, and 934--These searches are the results of word-of-mouth information about technology utilization. A former TUSC Information Retrieval Assistant who now teaches in a high school in Dallas, Texas, is the

informant. Although TUSC does not have confirming information, our assumption is that the person inquiring is a fellow teacher.

Included in this report is a record of Searches 867-941. Each search subject, as well as the numerical listing of them, follows (see pages 9 - 12).

Assistance--TUSC has continued its efforts to aid clients (as an information relaying agent) on the matter of Occupational Safety and Health Act (OSHA) as mentioned in the last two quarterly reports (QSR #30, pages 10 and 11, and QSR #31, pages 1 and 2). The Center had a request for OSHA Forms 100, 101, and 102. The forms were in the TUSC file because of our participation in the seminar that is reported in QSR #30; therefore, immediate assistance could be rendered as it was a mere matter of reproducing the forms in the number being requested. Although OSHA is not technology utilization per se, it fits into the "service" aspect of TUSC's overall mission. TUSC Industrial Specialists have noted with interest that there have been very few, if any, issues of the American Metal Market publication, over the past year, that have not featured one or more OSHA articles. Most of the articles usually concern safety standards and/or compliance reviews, with a heavy emphasis on the noncompliance penalties assessed. In repeating the need, it occurs to us that an industrial handbook needs to be readily available to those concerned about industrial safety--especially as an aid to small

businesses; they simply do not have the research resources needed to determine or confirm various compliance standards that are applicable to a given skill area. One of the better examples has to do with the day-to-day operations of a small town furniture store--a television set is sold but the buyer needs an "outside" antenna (no TV cable service available); the skills involved are carpentry, metal, and electrical. The furniture store owner is at a loss to know what his specific OSHA obligations are concerning the sale of the TV set and installation of the antenna.

Public institutions and industrial firms having a federal contract of \$10,000 or more are subject to an Equal Employment Opportunity Commission (EEOC) contract compliance review. One of the basic contract requirements is the establishment of an effective affirmative action program--which means that the contractor will affirmatively pursue an equal employment opportunity program and not discriminate against any employee (or applicant for employment) due to race, color, religion, sex, or national origin. TUSC welcomes the opportunity to be of service in areas such as EEOC and OSHA compliance because questions are often quite difficult and clients do not always know how to obtain answers to questions. TUSC is in a favorable position to lend assistance in areas that concern these matters. Most employers recognize EEOC as being a difficult area and one in which there are no "overnight", easy problem solutions; i.e., an employee cannot be terminated for the purpose of hiring another person just to improve the employment

distribution image, wages cannot be lowered to bring about compliance with the Equal Pay Act (inequities are corrected by raising salaries to the "equal" level), employment goals are not quotas, documentation is a must where personnel practices, policies, and/or actions are involved, etc.

The Flame Dynamics Laboratory at Oklahoma University requested TUSC's assistance in obtaining a NASA report -- N69-29417 -- a similar request was received from the SBA Regional Office in Dallas, Texas. TUSC responded by supplying microfiche copies of reports being requested.

A teacher, doing graduate work, elected to write a research paper on "How High School Students Can Use NASA/TUSC Literature." Assistance has been provided as needed -- for reference material, she is now using TUSC's First and Second Annual Reports.

The Center routinely provides a service to the Faculty and Staff by reproducing material used in their respective fields. As examples, we reproduced articles on the Wankel Engine and on the Care of Top Tomatoes and also information related to education such as busing, 12-month school year, etc.

TUSC contributions to higher education, relative to the institution where the Center is located, was an item reported upon by team members of a National Council for the Accreditation of Teacher Education who made a routine visit of the institution February 22-25, 1973. That part of the report

pertaining to TUSC confirms previous reports by TUSC concerning faculty/student assistance--the following quote was taken from page 6 of the NCATE Team's Report:

The statement concerning the Technology Use Studies Center (TUSC) housing NASA supplied materials (Problem 2, page 9 and 10, institutional report) was verified by the Visiting Team. This Center appears to be directed by a staff that is making every effort to acquaint students with the facilities and the services provided. Many topics in the Center files bear upon matters relative to various concerns of education, and the Center is assisting students with their graduate research problems. The potential of this Center appears to be growing, and its influence on student research should increase significantly.

Searches Processed During January, February, and March

<u>Search Number</u>	<u>Subject of Search</u>
867	Highlights of Apollo Program
868	LORAC, Hyperbolic RAYDIST, CONSOL, SOFAR, RAFOS
869	LORAN Navigation Systems
870	Theory and Practice of LORAN
871	GEE, DECCA, British Hyperbolic Navigation Systems
872	Navigation Systems Display Devices
873	Isotope Research
874	Standards for Aircraft Exhaust Emission
875	Sonic Aneometer or Acoustic Aneometer--Artillery Sound Ranging
876	State-of-the-art of Reverse Osmosis
877	Freeze-dry Dehydrators for Food
878	Radiation Therapy

<u>Search Number</u>	<u>Subject of Search</u>
879	Radio Biology
880	Human Cells
881	How Are Decorative Panels Made from Polyurethane?
882	Communication and Telemetry, Amplifiers, and Circuits
883	Use of Aerobic Sewage Systems
884	What Is the Evaporation Rate for Water Contaminated with Sulphuric Acid? Is there a Chart for this Mixture?
885	Medical Electronic Equipment Safety
886	Inverter or Transformer, 750 to 1,000 Watt, Changing 12 V DC to 115 AC
887	Chemical Thermo-electricity, Especially Catalytic
888	Is there a Type of Plastic That Will Conduct Electricity for Use in Electronic Systems?
889	Optical Lenses--Molding and Materials Used
890	Moisture Detectors
891	Economic Information of McCurtain and Bryan Counties
892	Aerospace Advances
893	Wastewater Treatment
894	Psychological Effects of Space Flight
895	Repeat of Search 894
896	State-of-the-art on Inverters or Transformers
897	Electrostatic Precipitators or Precipitation
898	Portable Electric Generators
899	Protecting Structural Steel from Chemical Corrosion
900	Carbon Monoxide Detection
901	How Is Vinyl Applied to Fiberboard?
902	Transistors Curve Tracers

<u>Search Number</u>	<u>Search Subject</u>
903	Ion Sources for the Production of Ion Beams
904	Rehydration Processes for Freeze-Dried Foods
905	Structural Analysis on Steel Buildings
906	State-of-the-art in Sensing Biological Information from Human, Particularly Metabolic Rate, Vasoconstriction, and Sympathetic Nervous System
907	Fluid Flow Measurement
908	State-of-the-art in Airport Planning
909	Insecticide Uptake of Brine Shrimp (Artemia)
910	Non-destructive Testing of Soldered Joints, Particularly Vibration Testing
911	Removing Hydrogen Sulphide Exhaust from a Smoke Stack
912	State-of-the-art in Hypertension
913	Pest Control, Insect (Roach) Control
914	Metal Cleaning Solvents and Problems of Disposing of the Waste and Fumes
915	State-of-the-art in Aging
916	Non-destructive Inspecting of Canned Goods
917	Order Control for Smoke
918	Smokeless Flare Systems for Waste Gases
919	Combustion Properties of Various Waste Gases
920	Timing Devices Using Crystals
921	Planning for Water-Oriented Recreation (Landscaping, Plant Types, Site Requirements, etc.)
922	Women at Work
923	Cultivation of Ziaiphus Jujuba in the Mediterranean Countries and in China
924	Lunar Soil as a "Fertilizer"
925	Oxygen Sensors or Expired Air Sensors

- 926 State-of-the-art in Nuclear Resonance Sensing
- 927 Hydrogen and Oxygen Fuel Cells
- 928 Ultrasonic Cleaning and Solvents for Small Parts
- 929 Blast Freezing Process--Using Ice Particles
- 930 Low Base Elastomers--Molded Rubber for Sealant
- 931 Magnetic Tapes--High Density Digital Recording
- 932 Clean Water
- 933 Atmospheric Electronic Devices for Monitoring Nitrogen Oxides
- 934 Probable "Collision" Date of the Planets with Neptune
- 935 Use of Infrared to Analyze Gas, Especially Carbon Monoxide and Carbon Dioxide
- 936 Population and Economic Information for KEDDO Counties
- 937 Population and Economic Information for SODA Counties
- 938 Low Temperature Characteristics for Plastics and Rubbers down to -70 F
- 939 Manufacturers of Spring Clips for Eye Glass Cases and Naugahyde Products
- 940 Remote Sensing of Blood Pressure and Heart Rate
- 941 Moisture Measurement Device in Process Stream such as a Catalytic Cracker

Faculty Information Service

Probably the best example of service in this category is reflected in Transfer 164 as mentioned in this report on page 2. Documentation of the transfer and use of NASA publications is included also in Appendix B. Service, in the form of assistance, is mentioned in the preceding section of this report--TUSC had four such requests for assistance during the quarter.

Economic profile data, that was compiled for each of the Southeastern Oklahoma counties in the TUSC service area, continue to draw clients to TUSC (both faculty and non-faculty)--searches 891, 936, and 937 are examples of the continued interest. Correspondence in Appendix B concerning TUSC assistance to the LeFlore County Health Department, relative to a request for updated data on the Human and Material Resources of LeFlore County, is additional indication of a need for an information service capability as to the economic, human, and material resources of the TUSC area.

Seventeen (17) total searches, 10 for faculty members and 7 for students, were completed during the quarter; furthermore, assistance service to the faculty was rendered on 5 occasions. Faculty Information Service of TUSC for the quarter exceeds 30% of the retrieval effort in considering assistance as well as searches.

Cooperation with Other Agencies

In one form or another during this reporting period, TUSC personnel were in contact with personnel in the Department of Labor, Equal Employment Opportunity Commission, National Science Foundation, Small Business Administration, Food and Drug Administration, Oklahoma State Health Department, and the Oklahoma City Department of Planning.

The occasions for the cooperation with agencies mentioned resulted from a search request or an assistance effort by TUSC. Numerous searches were accomplished in cooperation with the SBA. Also, TUSC was called upon to support the Technology

Utilization Program and efforts of the SBA's Southwest Region. Mr. S. Charles Pierce, the SBA's TU representative, working with TUSC, has been extremely efficient and effective as indicated by the transfers reported herein--reference transfers 165, 166, and 167. An interchange of correspondence concerning the matter of the SBA's TU program and Mr. Pierce is included as information in Appendix C.

Cooperation with the National Science Foundation also refers to a transfer (162) mentioned on page 1. Mr. Larry Atwell of the NSF relayed information about the sale of the Whitewright Fish Farm to Mr. Art Roberts, a Washington, D.C., acquaintance.

Cooperation with Department of Labor personnel is documented in various search requests concerning OSHA and other topics (related hereto are searches 837, 839, 854, 915 and 936 and information on pages 10 and 11 of QSR #30).

Cooperation with the Equal Employment Opportunity Commission is discussed on pages 7 and 8 of this report.

Search 916 provided the occasion for TUSC's cooperation with Food and Drug Administration personnel. This search is also discussed in this report on page 5.

Appendix B contains documentation of TUSC's service to the Oklahoma State Health Department. It concerns information on hypertension (Search 912).

Included also in Appendix B is the correspondence that pertains to TUSC's service to the Oklahoma City Department of Planning (Search 921).

General Center Functions

With 75 searches processed during the quarter, it is safe to state that actions and activities of the Center were fairly saturated with the task of completing/disseminating information requested in these searches.

The TUSC Director, Dr. Gold, received a very appropriate "thank you" type letter from our local Chamber of Commerce Manager; Dr. Gold served as Master of Ceremonies of the Annual Banquet held during this quarter--a copy of the appreciation letter is included in Appendix B.

Dr. Gold has also been named as General Chairman of the Durant Centennial Committee, celebration of which is scheduled for June 9-16, 1973. Needless to say, numerous meetings, conferences, etc., have increased the pace of activity for the TUSC Director in the planning sessions related to Durant's historic event.

Mr. A. M. Moore received an invitation to speak to the Hugo, Oklahoma, Rotary Club. The invitation was extended by Rev. Roy Dittmar, father-in-law of Astronaut William R. Pogue, who will be piloting the Third Skylab Mission. Mr. Moore spoke on, "The Values Emanating from the Space Program."

The following week Mr. Moore received an invitation to speak to the Idabel, Oklahoma, Rotary Club, April 11, 1973. The invitation was extended by the District Judge, Seventeenth Judicial District, who had attended the Rotary meeting at Hugo. Mr. Moore plans to speak on the subject, "The Space Program--Is It Worth the Cost?"

Mr. Moore attended the Tenth Anniversary meeting of the Aerospace Research Applications Center (ARAC). Attendees examined past operations of ARAC and participated in formulating plans for future activities of ARAC and similar NASA Regional Dissemination Centers as a positive step toward improving our Technology Utilization accomplishments. This meeting was extremely worthwhile in that it provided Mr. Moore the opportunity to meet with TUSC industrial specialist counterparts in addition to the Technology Utilization personnel from the NASA offices in Washington. Meetings of this type provide an excellent opportunity for the exchange and/or interchange of ideas relative to promoting "peaceful uses of space exploration and related research."

Mr. Bill Dodd attended a meeting in Stillwater, sponsored by Oklahoma State University; it concerned the Equal Employment Opportunity Act and Equal Pay Act. Such meetings are helpful to TUSC by keeping us informed on such matters which can then be relayed to business and industry as needed. As mentioned elsewhere in this and previous reports, TUSC attempts to provide assistance in matters that concern OSHA as well as EEOC.

TUSC Staff

TUSC had an addition this quarter of an information retrieval assistant, Mr. Bennie Oulds of Tulsa. Bennie is a Southeastern State College electronics major and has been very productive in his search efforts.

There were no other changes in the TUSC staff.

APPENDIX A

SUMMARY OF CHARACTERISTICS OF TUSC TECHNICAL SEARCHES

TABLE 1
SUMMARY CHARACTERISTICS OF TUSC TECHNICAL SEARCHES BY CATEGORIES,

Search Number	Abstracts Sent	Reports Ordered	SIC Code	STAR - IAA Categories																																		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
867	-	8	I-S																																			
868	-	-	I-T	No Information Available																																		
869	-	-	I-T																																			
870	22	-	I-T					1														19		2														
871	7	-	I-T	1																			6															
872	9	-	I-T	1												1							7															
873	9	-	I-T					1	2							1									1	3					1							
874	21	1	I-T	3				1																					1	2	10						4	
875	16	-	I-T													2	6	1				6	1															
876	20	-	I-T	2				1	2	1	4	2	1	4						1						1									1			
877	12	-	I-T				8	3	1																													
878	20	-	I-T				16	2		2																												
879	53	-	I-T				49	2																							1		1					
880	32	-	I-T				25	2									4														1							
881	-	-	I-T																																			

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Search Number	Abstracts Sent	Reports Ordered	SIC Code	STAR - IAA Categories																																																					
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882	-	3	I-S																																																						
883	4	-	I-T			1							3																																												
884	-	-	I-T			Information not Available on This Subject																																																			
885	13	-	I-T			2	6				1	1			1									1												1																					
886	9	-	I-T			4	2				3																																														
887	9	-	I-T	1		4												1				1			2																																
888	1	-	36																1																																						
889	16	-	36					1		2		1	6		2	1								3																																	
890	10	-	I-T										6	3							1																																				
891	-	-	I-C																																																						
892	-	3	I-S																																																						
893	-	-	I-F																																																						
894	23	-	I-F			8	12						1										1					1																													
895	23	-	I-S			8	12						1										1					1																													
896	11	-	I-T			5	1	2		3																																															

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Search Number	STAR - IAA Categories																																					
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897	21	-	I-T					1				2	1				1	7					3		1	4						1						
898	4	-	I-S									3						1																				
899	12	-	33																	5	4	2													1			
900	3	-	20					1	1								1																					
901	-	-	I-T																																			
902	-	-	I-S																																			
903	30	-	I-T			1											3			2							9	11	1	1	2							
904	10	-	I-T				6	3	1																													
905	29	-	I-T								3									1		1	1												22	1		
906	32	3	I-T				16	14											2																			
907	24	-	I-T					8									11							1	1			3										
908	22	-	I-S		5						2		3	4	1	1								1	1												4	
909	1	-	I-F						1																													
910	10	1	I-T									2						7			1																	
911	8	-	I-T						2	3					1	2																						

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Search Number	Abstracts Sent	Reports Ordered	SIC Code	STAR - IAA Categories																																													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34												
912	19	1	I-O				15	2				1						1																															
913	4	-	I-T						4																																								
914	4	1	I-T		1					1	1								1																														
915	36	-	I-F				34	2																																									
916	3	3	I-T				3																																										
917	9	-	I-T					1	3							5																																	
918	9	-	I-T				2	2								3		1																		1													
919	7	-	I-T				1		3	1												1					1																						
920	12	-	I-F								1		1		1	6	1										1							1															
921	-	-	I-O																																														
922	-	-	I-S																																														
923	-	-	I-S																																														
924	3	-	I-S																																3														
925	20	-	I-T					6	2				1			2	8	1																															
926	-	-	I-T				Sent 9	STAR and IAA Subject Index Pages																																									

SUMMARY CHARACTERISTICS OF TUSC TECHNICAL SEARCHES BY DATA SOURCE

23

TABLE 2

SUMMARY CHARACTERISTICS OF TUSC TECHNICAL SEARCHES BY DATA SOURCE

Search Number	Federal R & D Reports	Library of Congress	McGraw - Hill	TUSC Library	SSC Library	Tech Briefs	Contractor Reports	Technical Notes	Special Publications	Aerospace Technology	American Aviation	Aviation Week	Business Week	Electronics Engineering News Record	Food Engineering	Forest Industries	Industrial Research	Instruments & Control Systems International Science & Tech.	Iron Age	Materials Engineering	Modern plastics	Oil & Gas Journal	Research & Development	Science	Technology Week	Welding Journal	Sales Management	Business Automation	Thomas Register	AD Abstracts	WPCF Journal			
882									3																									
883						1																									1			
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TABLE 2

SUMMARY CHARACTERISTICS OF TUSC TECHNICAL SEARCHES BY DATA SOURCE

Search Number	Federal R & D Reports	Library of Congress	McGraw - Hill	TUSC Library	SSC Library	Tech Briefs Contractor Reports	Technical Notes	Special Publications	Aerospace Technology	American Aviation	Aviation Week	Business Week	Electronics Engineering News Record	Food Engineering	Forest Industries	Industrial Research	Instruments & Control Systems	International Science & Tech.	Iron Age	Materials Engineering	Modern Plastics	Oil & Gas Journal	Research & Development	Science	Technology Week	Welding Journal	Sales Management	Business Automation	Thomas Register	AD Abstracts	WPCF Journal	Combustion
897																																
898																																
899																1				2												
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908																																
909																															2	
910					1			1																								
911																																3

SUMMARY CHARACTERISTICS OF TUSC IDENTICAL SEARCHES BY DATA SOURCE

26

TABLE 2

SUMMARY CHARACTERISTICS OF TUSC TECHNICAL SEARCHES BY DATA SOURCE

Search Number	Federal R & D Reports	Library of Congress	McGraw - Hill	TUSC Library	SSC Library	Tech Briefs Contractor Reports	Technical Notes	Special Publications	Aerospace Technology	American Aviation	Aviation Week	Business Week	Electronics	Engineering News Record	Food Engineering	Forest Industries	Industrial Research	Instruments & Control Systems	International Science & Tech.	Iron Age	Materials Engineering	Modern Plastics	Oil & Gas Journal	Research & Development	Science	Technology Week	Welding Journal	Sales Management	Business Automation	Thomas Register	AD Abstracts	The Daily Oklahoman	WPCF	Journal of Combustion	Monthly Labor
927					1																														
928					1																														
929															3																				
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935					2																														
936				6																								2					1		
937				6																								2					1		
938																						5													
939																														2					
940					10			1																											
941																							4												
TOTAL	0	0	0	21	1	45	4	0	19	0	0	0	0	2	0	3	0	1	0	0	0	2	20	4	0	8	0	0	4	0	2	0	2	22	4

APPENDIX B

SELECTED TRANSFER AND IMPACT REPORTS

CORRESPONDENCE RELATING TO

TRANSFER 164



dallas independent school district

SKYLINE CENTER



2 February 1973

Nolan Estes
General Superintendent

Mr. Moore
Technology Use Study Center
Southeastern State College
Durant, Oklahoma 74701

Dear Mr. Moore:

On behalf of the Skyline Career Development Center, The Electronic Sciences Cluster, and the students of electronics at Skyline High School, I thank you for your continuing flow of helpful information.

The four electronics classrooms at Skyline have the latest up-to-date NASA Tech Briefs posted for all to see and use. We have several NASA SP's in our cluster library that are keyed to our curriculum (see the attached copy). Later this year, our class of one-hundred forty students will be utilizing this material in the design and construction of various electronic projects which will be entered in local, state and national VICA (Vocational Industrial Clubs of America) contests.

We who teach have found that motivation is the key to successful learning. NASA's information relates to the student of today. We are proud to share in the warehouse of knowledge that TUSC represents.

Cordially yours,

David S. Little

David Little
Instructor of Electronics
Skyline High School



NOTE: Attachment is not included in this report; however, it will be submitted as a Special Report to NASA Headquarters.

CORRESPONDENCE RELATING TO

TRANSFER 165

WILLIAM E. BROWN & ASSOCIATES
413 FALL CREEK DRIVE, RICHARDSON, TEXAS 75080
(214) 235-6009

DR. WILLIAM E. BROWN

CONSULTING IN SCIENCE AND TECHNOLOGY
PRODUCT DEVELOPMENT MANAGEMENT RESEARCH

December 7, 1972

RECEIVED

DEC 12 1972

REGION VI - PMA

Mr. Robert L. Pou, Jr.
Chief, PMA Division
Small Business Administration
1100 Commerce Street
Dallas, TX 75202

Dear Mr. Pou:

I am happy to have the opportunity to comment on the effectiveness of your Technology Utilization Program in connection with my search for information on small size ozone generators and the use of ozone for water purification.

The circumstances of this case are particularly suited to use as a basis for evaluation. Before I learned from Mr. Charles Pierce of the services available through your Technology Utilization Program, I had made a comprehensive literature survey on ozone and ozone generators. This showed that very little was available in the open literature in the U.S. and much of the foreign material was in obscure journals. It is difficult for a small business to undertake the lengthy process of acquiring, translating and evaluating technical information.

It was accordingly most helpful to have the assistance of Mr. Pierce in first obtaining summary information in the form of bibliographies, search abstracts, etc. and then to have his prompt assistance in locating sources of copies of the original material and in many cases obtaining the needed photocopies themselves.

What was even more beneficial was that a high percentage of the material was directly applicable to my work. Usually, I would expect about 10% of related information is actually useful; I estimate that over one third of the information which Mr. Pierce provided was directly applicable. Some of the references would have been very difficult for me to obtain without help.

I am very pleased with the quality of the information that was provided and the speed with which it was obtained,

Mr. R. L. Pou, Jr.

-2-

December 7, 1972

especially in view of the wide range of sources which were utilized.

The only improvement that I could suggest, which may not be within your mission, would be to provide access to a broader basis literature search than is now available. For example, a significant amount of published material on water treatment work by Federal Agencies is abstracted in Chemical Abstracts and a computerized search of these entries would increase the breadth of coverage.

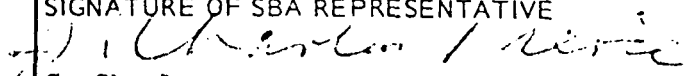
I want to complement you on your Technology Program and especially to express my appreciation for the thoroughness and persistence of Mr. Charles Pierce in obtaining so much useful information.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. E. Brown".

W. E. Brown

WEB:elb

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: January 8, 1973
	Name and Address of Concern: <i>(include ZIP code)</i> William E. Brown & Associates 413 Fall Creek Drive Richardson, Texas 75080
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	CASE #102-1
Description of SBA Assistance Original contact was through Telephone Request. This firm desired information on small size Ozone Generators. Also, application of Ozone to Water Purification.	
Specific Benefit to Concern The following information was obtained and forwarded Mr. Brown. 1. From NTIS a. Search Report of 8 abstracts on "Small Size Ozone Generators" b. Search Report of 20 abstracts on "Ozone in Control of Odors, Food preser- vation health hazard on inhalation" c. Search of 18 abstracts "Purification or sterilization of water using ultraviolet light, iodine or ozcne" d. Document PB-199361 "Federal Water Pollution on Combined Sewer Overflow Seminar Papers" <div style="text-align: right;">Continued page 2</div>	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

-2-

Report of PMA Assistance to
Small Business Concerns

William E. Brown & Associates
Richardson, Texas

Continued material furnished from NTIS:

- e. Document PB-187758 entitled "Ozone Treatment of Secondary Effluents from Wastewater Treatment Plants"
- f. Document PB-187759 entitled "Ammonia Removal from Agricultural Runoff and Secondary Effluents by Selected Ion Exchange" by Pacific NW Labs, Richland, Washington.
- g. Document PB-198225 - 2 Microfiche cards of approximately 100 pages entitled "Treatment of Acid Mine Drainage by Ozone Oxidation" from Brookhaven National Lab, Upton, N.Y.
- h. Publication N71-32819 entitled "Ozone Formation by Electrical Discharges"

2. From TUSC

- a. Abstract on "Water Purification"
 - b. 7 abstracts on "Ozone Generators"
 - c. 14 page article entitled "Increased Rate and Efficiency of Phenolic Waste Ozonization"
- 3. From Texas Medical Center Library Houston, MEDLARS Search of 67 citations on "Ozone Effects"
 - 4. From Defense Documentation Center, Alexandria, Report Bibliography entitled "An Improved Ozone Generator (Ozoneur Perfectionne)"
 - 5. From Naval Research Laboratory, Washington, D.C., entitled "An Improved Ozone Generator" by Jean Guillerd and Fernand Travers.
 - 6. Document BNL-13812 entitled "Ozone Synthesis for Water Treatment by High Energy Radiation" by Meyer Steinberg and Morris Beller, Brookhaven National Laboratory, Dept. Applied Science, Upton, N. Y. Presented at American Institute of Chemical Engineers 62nd Annual meeting, Washington. Symposium on Waste Treatment Applications of Radiation Chemistry, performed under auspices of U.S. Atomic Energy Commission.
 - 7. Document AD-700467 Report 5439.10-C "Why is Condensed Oxygen Blue" California Institute of Technology, U.S. Army Research Office, Durham, N.C.
 - 8. From EPA - Document 14010FMH entitled "Treatment of Acid Mine Drainage by Oxidation"

Copy of complimentary letter is attached.

CORRESPONDENCE RELATING TO

TRANSFER 166

D - CO - INC.

ENGINEERS - CONTRACTORS

POST OFFICE BOX 5362 • SANTA FE, NEW MEXICO 87501 • TELEPHONE (505) 983-1594

.5-February-1973

Robert L. Pou, Jr.
Chief, Procurement and
Management Assistance Division
U.S. Government
Small Business Administration
Region VI
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pou:

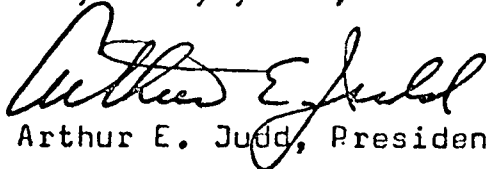
I want to personally commend and thank you and your staff, particularly Mr. Charles Pierce, for the assistance provided D-CO-INC in technical areas.

The effectiveness of the Technology Utilization program, I feel sure, can be credited to utilizing professionals such as Mr. Pierce. It is especially comforting for us to realize that when we have initiated a request for information, your staff understands the technical questions involved and directs the inquiry to technically competent individuals.

The information recently provided us in the area of electronic security has enabled us to follow a much more accurate technical schedule. Even inquiries that provided negative data, (ie: costs prohibitive to produce an item in the way we had considered, or no data available on a particular subject) are of real interest to us.

We feel certain that the technology utilization program is beneficial over the short term, but believe that the real effectiveness of the program can only be truly evaluated over the long pull.


Very truly yours,



Arthur E. Judd, President

AEJ:ms

Judd 166

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: February 12, 1973
	Name and Address of Concern: (include ZIP code) Mr. Arthur E. Judd D-Company, Inc. P.O. Box 5362 Santa Fe, New Mexico 87501 CASE #112-2, 112-3 & 112-4
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contacts made through Plant Visit. <u>Case #112-2</u> Firm interested in foot step detectors involving piezo electronic devices, pressure transducers, or seismic sensors - includes proximity detectors.. <u>Case #112-3</u> Firm interested in type of alarm system used for broken glass. Thinking of using an invisible coating under surveillance of ultra-violet or infrared light which could be painted or sprayed on the glass and signal the alarm if the glass is broken. <u>Case #112-4</u> Firm desires information on electronic security devices, electronic surveillance, perimeter protection, fence protection.	
Specific Benefit to Concern <u>Case #112-2</u> The following information was obtained and forwarded Mr. Judd. 1. From TUSC a. 8-pp article on Ultraviolet and Infrared Astronomy b. Tech Brief 66-10533 "Method Permits Mechanical & Electrical Checkout of Piezoelectric Transducers while Installed in a system" c. TB-69-10281 "Piezoelectric Lock Mechanism Resists Lockpicking" d. TB-7010157 "Piezoelectric Transducer" e. TB-7010460 "Fabrication of Electroacoustic RF Amplifiers" f. 15 abstracts g. 6-pp article entitled "Miniature Processing Transducer" (con't page 2)	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Administration

Mr. Arthur E. Judd
D-Company, Inc.
Santa Fe, N. M.

Continued Case #112-2

From TUSC:

- h. 5-pp article "Precision Electronic Measurement"
- i. 9 abstracts
- j. TB-6410021 "Pressure Transducer 3/8 inch in size can be faired into surface"
- k. TB-10174 "Pressure Transducer System is force-balanced - Has digital output"
- l. TB-6510301 "Remote Rapidly Varying Pressures Accurately Measured"
- M. TB-6610353 "Acceleration compensated pressure transducer has fast response"
- n. TB-6710669 "Ultraminiature Manometer-tipped Cardiac Catheter"

2. From NTIS:

- a. 7 searches on "Foot step detectors involving piezoelectronic devices, pressure transducers or seismic sensor"
- b. 9 searches "Intrusion detection devices, infrared long range equal or less than 1 mi."

Case #112-3 the following information was forwarded Mr. Judd:

- 1. TUSC search of 9 abstracts on type of alarm system that can be used for broken glass.
- 2. Defense Documentation Center - Report Bibliography on "Alarm Systems for Broken Glass"
- 3. NASA Lit Search of 79 citations on "Infrared Intrusion Detection Devices"
- 4. Letter received by TUO and sent to Mr. Judd from the NASA Scientific and Technical Information Facility, College Park, Md., stating NASA and IAA files revealed no pertinent citations on Alarm System for Broken Glass.

Case #112-4 the following information was forwarded Mr. Judd:

- 1. TUSC
 - a. Search of 7 abstracts related to subject
 - b. TB 66-10548 "Security Warning System Monitors up to Fifteen Remove Areas Simultaneously"
- 2. NTIS
 - a. Search of 9 abstracts related to subject
 - b. PB-197556 "A Survey of Techniques Used to Reduce Vandalism and Delinquency in Schools"
 - c. PB-185-176 "1969 Carnahn Conference on Electronic Crime Countermeasures"
 - d. PB 198324 "1971 Carnahan Conference on Electronic Crime Countermeasures"
- 3. NASA Literature Search #20111 of 18 citations "Electronic Security Devices"
- 4. Defense Documentation Center Lit. Search about 1" thick "Electronic Security Devices"
- 5. Office of Research and Engineering, College of Engineering, University of Kentucky. Bulletin 92 with Supplement on "1970 Carnahan Conference on Electronic Crime Countermeasures" approx. 250 pages.

Copy of complimentary letter from Mr. Arthur E. Judd of D-Company, Inc., is attached.

CORRESPONDENCE RELATING TO

TRANSFER 167

GRUBER R & D CO.

6801 Gruber Ave., N.E.

Albuquerque, New Mexico 87109

Phone (505) 344-1611

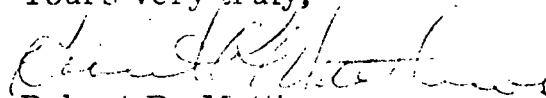
January 24, 1973

Small Business Administration
Region VI - PMA Division
1100 Commerce St.
Dallas, Texas 75202
Attn: Mr. S. Charles Pierce

Dear Mr. Pierce:

Thank you for your patience in waiting for a reply from me concerning the subject material. Your search and results of the search have been extremely helpful to us in determining what is available in fire or smoke type sensors and seismic intrusion detectors. The material you have furnished has helped greatly in the planning of future products for our company. Again, thank you for your efforts.

Yours very truly,

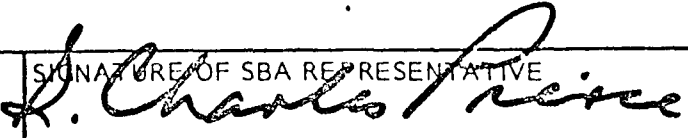

Robert P. Matthews
Vice President

RPM/sk

RECEIVED

JAN 23 1973

REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: February 12, 1973
	Name and Address of Concern: (include ZIP code) Mr. Robert P. Matthews, Vice President Gruber R & D 6801 Gruber Avenue, N.E. Albuquerque, N. M. 87109
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	Case #102-6 and 112-6
Description of SBA Assistance Original contact made through Plant Visit <u>CASE #102-6</u> Firm interested in fire or smoke type sensors where there is an electrical circuit change. Search in this area should include Ion gages, detection combustible gases, solid state gas sensors or the Taguchi Sensor. <u>CASE #112-6</u> Firm especially interested in information regarding seismic intrusion detectors or vibration intrusion detectors.	
Specific Benefit to Concern <u>Case #102-6</u> The following information was obtained and forwarded Mr. Matthews: 1. NTIS search of 6 abstracts related to subject 2. NASA Lit search of 75 citations entitled "Fire or Smoke Sensors" 3. Defense Documentation Center Report Bibliography of 125-pp booklet on "Fire-Smoke Sensors" 4. TUSC Search of 7 abstracts on fire or smoke type sensors involving an electrical circuit change. <div style="text-align: center;">(Con't page 2)</div>	
Savings to Government, If Any (Be Specific) <div style="text-align: center;">NA</div>	
Other Benefits to Government <div style="text-align: center;">NA</div>	
FROM: Robert L. Pou, Jr. Chief PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Concerns

Mr. Robert P. Matthews,
Vice President
Gruber R & D
Albuquerque, N.M.

Continued Case #112-6.

1. From NTIS
 - a. PB-198324 entitled "1972 Carnahan Conference on Electronic Crime Countermeasures"
 - b. Search of 7 abstracts on foot step detectors involving piezo electronic devices, pressure transducers or seismic sensor.
 - c. 9 abstracts on intrusion detection devices, infrared long range, equal or less than 1 mile.
2. From TUSC
 - a. 8 abstracts plus 4 NASA Tech Briefs
 - b. 29 abstracts plus 17 pp article from Space Astronomy entitled "Ultraviolet and Infrared Astronomy."
 - c. 4 NASA tech briefs on subject.
3. From Defense Documentation Center
 - a. Literature Search on "Electronic Security Devices"

Copy of complimentary letter from Mr. Matthews is attached.

CORRESPONDENCE RELATING TO

SEARCH 912



OTHO R. WHITENECK, D.D.S., President
ROBERT D. McCULLOUGH, D.O., Vice President
ROBERT L. LOY, Secretary
GLEN L. BERKENBILE, M.D.
WAYNE J. BOYD, M.D.
BERT T. BRUNDAGE, M.D.
CARL D. OSBORN, M.D.
EUGENE A. OWENS, M.D.
HAROLD A. TOAZ

Oklahoma
State Department of Health

N.E. 10th & Stonewall, Oklahoma City, Oklahoma 73105

March 6, 1973

48
To
QSR #32
Jeo.

C. Henry Gold, Ph.D.
Director
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Dr. Gold:

I can't tell you how much I enjoyed meeting and visiting with you and Mrs. Gold. I just returned from a trip to find your kind letter and information on hypertension.

I had the book marked "return" Xeroxed and I am returning said material with many thanks. Some of the information we have already utilized in preparing our Hypertension Clinic Manual, (draft copy enclosed for your information).

Please stop by for a visit on your next trip to the City.

Respectfully yours,

A handwritten signature in cursive script, appearing to read "Leo K. Hughes, Jr.".

Leo K. Hughes, Jr.
Staff Assistant

LKH:gr

Enclosures



Hypertension Detection Program of Oklahoma



OKLAHOMA STATE DEPARTMENT OF HEALTH
DIVISION OF CHRONIC DISEASE

O K L A H O M A
HYPERTENSION DETECTION PROGRAM

by

Leo K. Hughes, Jr.
Staff Assistant
Chronic Disease Division

with

Medical Direction From
Robert D. Lindeman, M.D.
Consultant
Chronic Disease Division

July, 1972

OKLAHOMA STATE DEPARTMENT OF HEALTH
3400 N. Eastern
Oklahoma City, Oklahoma
73105
(405) 427-6561

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HYPERTENSION DETECTION PROGRAM

I. HYPERTENSION

A. GENERAL CONCEPTS

An adequate level of blood pressure is essential to maintain the circulation and perfuse the organs of the body. This level is a reflection of many variables such as age, activity, exercise, the state of the vasculature, etc. The blood pressure of an individual also fluctuates widely between sleeping and waking and with changes in the emotional state of the subject. Because of these many variables, one cannot give a single value for the (normal) level of blood pressure.

The blood pressure level rises with increasing age. At birth, it is approximately 80 mm. Hg. systolic and 40 mm. Hg. diastolic. The level continues to rise until the mean adult level of 120/80 is reached. The rise progresses with age until or about the age of 60 when the mean is usually 140/90. In the United States, mortality rate from hypertension and its complications is several times higher in Negroes than in whites. There is also a marked difference among the sexes in terms of clinical disease. Hypertension in the female prior to the age of 40 is less frequent and better tolerated than in the male of corresponding age, but after this age the prevalence of hypertension in the female exceeds that in the male. Some additional factors that enhance prevalence of hypertension are arteriosclerosis, obesity, diabetes and possibly a high salt intake.

The great majority of patients with hypertension without an adequate work-up will be labeled "essential" almost always due to lack of identification of a specific cause. It appears that many variables contribute to their condition. Genetic, arteriosclerotic, and environmental influences are such factors. Most people diagnosed as having "essential" hypertension will have more than the average amount of arteriosclerosis for their age upon autopsy. The exact status of the arteriosclerosis is almost impossible to determine during life, but evidence of coronary and cerebral vascular disease and kidney failures are evidence of far advanced arteriosclerosis. "Non-essential" hypertension having identifiable causes of high blood pressure have been discovered in increasing numbers in recent years because of increased medical knowledge.

Many forms of acute and chronic renal disease may be associated with an elevation of the blood pressure (glomerulonephritis, pyelonephritis, arteritis of the kidney, polycystic disease and various congenital lesions). Interference with the arterial blood supply to the kidney (renal artery stenosis or coarctation of the aorta) may result in hypertension. Two adrenal tumors (aldosterone secreting tumor and pheochromocytoma) are rare causes of hypertension.

Hypertension puts an extra share of work on the heart and arteries. The heart must pump with increased force, and the arteries must carry blood that is moving under increased pressure throughout the body. In order to accommodate for this increased workload, the heart enlarges and hypertrophies until it is much larger than its original size. The arteries and arterioles, after the wear and tear of years of high blood pressure, may become hardened, less elastic, and even scarred.

B. HYPOTENSION

Low blood pressure is usually thought of as an asset because it places less strain on the heart and arteries. Hypotension is also used frequently to describe an acute fall in blood pressure, as occurs in shock. Only occasionally is low blood pressure a serious condition. When this is the case, the low pressure is generally a symptom of some disease that can be treated. The patient with hypotension or low blood pressure should not be referred unless symptoms of recurrent fainting in the upright position occur.

C. SCREENING FOR HYPERTENSION

Systemic arterial blood pressure represents a force which is the result of cardiac output and peripheral vascular resistance. It is readily measured indirectly by a standard sphygmomanometer. Two types of pressure registering apparatus are in general use: the mercury gravity manometer and the aneroid manometer. Both give accurate and reproducible results when working and used properly.

D. INCIDENCE OF HYPERTENSION

Life insurance data have established that for either sex and at any age mortality is directly related to the level of the blood pressure (whether measured as systolic or diastolic or both) down to and including the so-called normal levels. It is now recognized that the optimal blood pressure for an adult may even be below 120/80 and that some increases in mortality are experienced with elevations of only 10 to 20 mm. Hg. Thus, exactly what level of blood pressure constitutes hypertension is difficult to determine and, therefore, the term has been variously defined. Some experts define it as a blood pressure

more than two standard deviations above the mean for the age, and so arbitrarily limit the prevalence to five per cent of the population. When an arbitrary value such as 150/90 or more is used to define hypertension, the prevalence of this condition is enormous. By this definition as many as 15 per cent of men in their thirties and 20 per cent of men in their fifties have hypertension. Using these criteria, high blood pressure becomes a very common disease in the United States affecting more than 20 million Americans.

Individuals with elevated blood pressure have excessive mortality from coronary artery disease, cerebral vascular disease (thrombosis or hemorrhage) and vascular kidney disease.

Death from renal disease is seen chiefly in those persons having accelerated (malignant) hypertension and occurs more frequently in Negroes than in whites.

II. SCOPE OF THE SCREENING PROGRAM

A. AIMS OF THE PROGRAM

1. Health Education

Obviously, health education is an important part of the program. Educational materials and audio-visual aids are available to the county through the State Department of Health. It is hoped that an on-going hypertension screening program will increase understanding and appreciation of the services offered by the county health department to the general public. It is also hoped that by making people aware of the different aspects of hypertension they will take the responsibility of seeing that they and members

2. Case Finding

It is unfortunate that many cases of hypertension go unrecognized since the condition develops silently until complications occur. It has been estimated that of the more than 20 million Americans suffering from hypertension, about half are undiagnosed, and about 70 per cent of those that are recognized are receiving no, or inadequate, treatment. Detection and evaluation mechanisms are needed for the millions of persons with hypertension presently undiagnosed and untreated. Effective and economically feasible systems need to be devised. Almost all cases of hypertension whether mild or very severe can be controlled by any of a variety of effective drugs or combination of drugs for reducing elevated blood pressure.

B. WHO SHOULD BE TESTED?

Ideally, every individual regardless of age should have their blood pressure checked periodically. Due to the very low percentage of positive "finds" it is suggested that age groups below age 21 not be screened unless personnel time permits.

C. PROGRAM SUPERVISION

All clinic activities should be approved by the county health director. Technical consultation is regularly available from the State Health Department in regard to referral levels and use of supplies and equipment.

Regular consultation relating to screening techniques by clinic personnel is also available.

D. WHO SHOULD PERFORM THE TESTING?

Hypertension testing can be capably performed by trained nursing personnel or technicians. Consultants from the State Health Department are available to train personnel in the use of the testing materials.

III. TESTING PROCEDURE

A. CLINIC LOCATION

Any central location conveniently accessible to the clinic staff and county population can be used. Offices of county health departments, churches or a school site are preferable. If the county is of considerable size, or if several large cities are present, more than one site may be desirable. In some cases, mobile satellite clinics, as off-shoots of the main clinic, operate effectively in remote areas of the county. The goal is to reach the entire county population, not merely the urban population.

B. BLOOD PRESSURE DETERMINATION

The arterial blood pressure is the lateral pressure, or force, exerted by the blood on a unit area of the blood vessel wall. The arterial blood

pressure is constantly changing during the course of the cardiac cycle. The highest pressure in this cycle is the systolic blood pressure; the lowest is the diastolic blood pressure.

C. TECHNIQUE

1. The nurse, technician, or observer should arrange himself in a position to receive the patient's arm and when observing the pressure, her eyes should be level with the manometer. The observer should avoid being in a strained position at any time.
2. The patient should be comfortably seated, with the arm extended slightly flexed and the whole forearm supported at heart level on a smooth firm surface. Readings taken in any other position should be specified.
3. The deflated compression cuff is applied evenly and snugly but without constriction around the arm. The lower edge of the cuff should be one inch above the point at which the bell of the stethoscope is to be placed with the portion of the cuff containing the rubber-air-bag over the inner aspect of the arm.

4. The stethoscope bell should be applied to the antecubital space firmly, but with as little pressure as possible and with no space between the skin and the bell of the stethoscope.

5. With the stethoscope bell in place, the compression cuff is then inflated to about 30 mm. Hg. above the pressure at which the radial pulse disappears. The cuff is then deflated at a rate of 2 to 3 mm. Hg. per heartbeat.

6. The pressure within the compression cuff indicated on the manometer at the moment the Korotkoff* sounds are first heard represents the Systolic Blood Pressure.

7. The pressure within the compression cuff indicated by the manometer at the moment the sound suddenly becomes muffled, represents the First Diastolic Pressure. The Second Diastolic Pressure is the pressure within the compression cuff at the moment the sounds finally disappear. Both of these diastolic blood pressures should be recorded with the systolic blood pressure in the conventional way as illustrated at the bottom of Figure I. Referrals will utilize only second diastolic pressure.

8. When all sounds have disappeared, the cuff should be deflated rapidly and completely. Four to five minutes should elapse for the release of blood trapped in the veins before further determinations are made. Flex arm a time or two to stimulate circulation before reinflating cuff.

D. REFERENCE LEVELS (HYPERTENSION)

At least three blood pressures with the patient in a comfortable sitting position should be taken at five minute intervals. If the patient is found to

*See Figure I

have an elevated blood pressure the third blood pressure reading should be taken after 10 to 15 minutes lapse, preferably spent outside screening area.

Normal -	Anything under 140/90 all ages Recheck in 2 years
Borderline -	140/90 to 160/100 Recheck in 6 months
Positive -	Anything over 160/100 up to age 64 Anything over 180/100 age 65 and over Refer immediately to a physician
Emergency -	210/120 or over any age group

Base referrals on second diastolic pressure (disappearance of sound).

If any one of the multiple readings done during screening procedure falls below the referral level, do not refer. If the screenee's age is under 30 and pressure is within normal limits have him return in 5 years.

E. CLINIC SUPPLY LIST

A. Administrative Supplies

1. Hypertension Educational Literature
2. Hypertension Screening and Referral Forms
3. Table with Two Chairs
4. Bed or Examining Table (Optional)

B. Medical Supplies

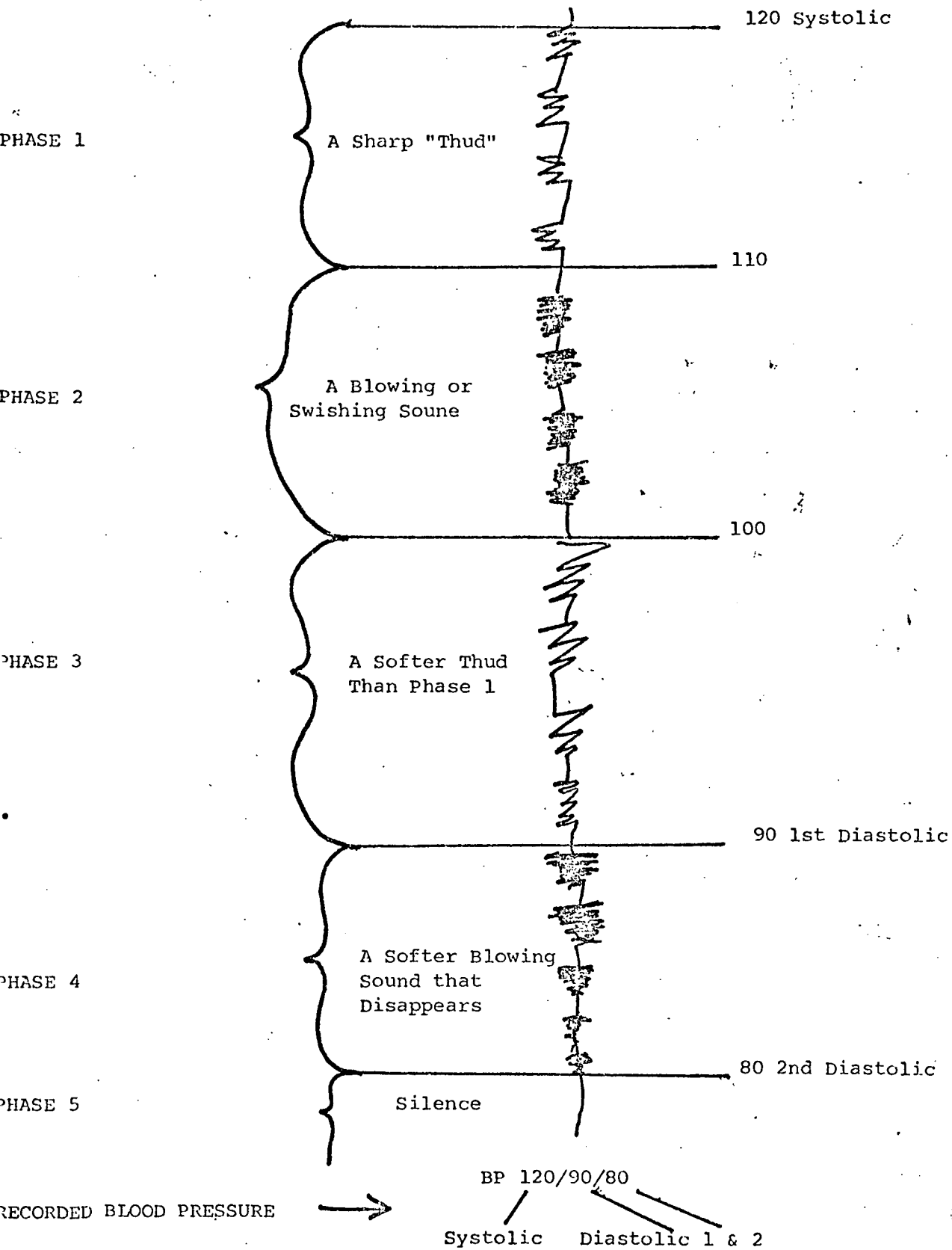
1. Manometer
 - a. Mercury Gravity
 - b. Aneroid
2. Stethoscope (Standard Variety)

F. POINTS TO REMEMBER

1. Improper positioning of the extremity

2. Improper deflation of the compression cuff
3. Possibility of defective equipment
4. A single casual blood pressure reading does not always characterize an individual's blood pressure accurately.
5. A standard stethoscope with tubing of proper length and comfortable, well-fitting ear pieces should always be utilized.

FIGURE
PHASES OF THE KOROTKOFF SOUNDS



CORRESPONDENCE RELATING TO
MISCELLANEOUS TRANSFERS AND IMPACT REPORTS



U. S. GOVERNMENT
SMALL BUSINESS ADMINISTRATION
REGION VI
1100 COMMERCE STREET
DALLAS, TEXAS 75202

214-749-2218

61

to file

January 9, 1973

Mr. Augie Moore
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Augie:

Enclosed are copies of five case studies and complimentary letters resulting from information furnished to a TU client by this office. A TUSC search was a part of the information furnished in these cases.

Thanks again for your part in making the TU Program a success in our area.

Sincerely,

S. Charles Pierce
Technology Utilization Officer

Enclosure





U. S. GOVERNMENT
SMALL BUSINESS ADMINISTRATION
REGION VI
1100 COMMERCE STREET
DALLAS, TEXAS 75202

214-749-2218

62

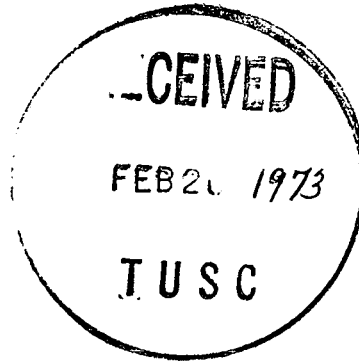
BEING ONE

HAS JUST
BEGUN

g
to
Staff
3/8
70 JLB

February 16, 1973

Mr. Augie Moore
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701



Dear Augie:

Enclosed are copies of five case studies and complimentary letters resulting from information furnished to a TU client by this office. A TUSC search was a part of the information furnished in these cases.

Thanks again for your part in making the TU program a success in our area.

Sincerely,

S. Charles Pierce
Technology Utilization Officer

Enclosures



U. S. GOVERNMENT
SMALL BUSINESS ADMINISTRATION
REGION VI
1100 COMMERCE STREET
DALLAS, TEXAS 75202

214-749-2218

63

BEING ONE



HAS JUST
BEGUN

March 15, 1973

Mr. Augie Moore
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Augie:

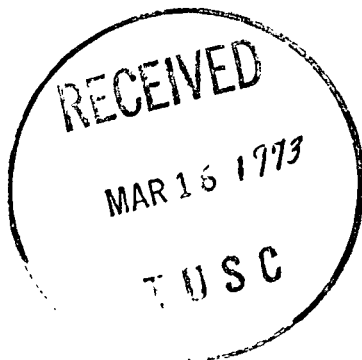
Enclosed are five case studies and complimentary letters resulting from information furnished to TU clients by this office. A TUSC search was a part of the information furnished in each case.

Thanks again for your part in making the TU Program a success in our area.

Sincerely,

S. Charles Pierce
Technology Utilization Officer

Enclosures



HY-BON**Engineering Company, Inc.**P. O. BOX 4185 2121 W. FLORIDA PHONE 682-5344 MIDLAND, TEXAS 79701
PHONE 563-1131

March 5, 1973

Small Business Administration
Region VI
1100 Commerce Street
Dallas, Texas 75202

RECEIVED
MAR 6 1973
REGION VI - PMA

Attention: Mr. R. L. Pou, Jr.

Dear Mr. Pou:

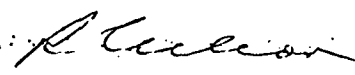
We have received from Mr. C. Pierce's effort, an abundance of reference data covering our problems of high frequency noise level and vibration shut off devices. In fact one of our employees has been finding data concerning related problems that were never thoroughly researched before.

Our company is very appreciative of the prompt and thorough information and data furnished, thus in the future we certainly want to check with your availability when encountered with similar technical problems.

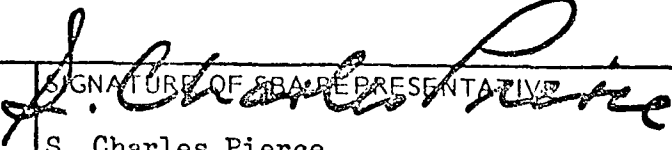
We thank you and your staff for a thorough job.

Yours very truly,

HY-BON ENGINEERING COMPANY, INC.


Ralph Nelson

RN/bnr

REPORT OF PMA ASSISTANCE TO - SMALL BUSINESS CONCERNS	Date: March 23, 1973 65
	Name and Address of Concern: (include ZIP code) Mr. Ralph Nelson Hy-Bon Engineering Co., Inc. 2121 West Florida Midland, Texas 79701 CASE #122-5
Instructions: Forward original to Deputy Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contact through BR #2 This firm manufactures rotary compressors to eliminate sour gas in oil fields. Wants information on using equipment on sewer gases (same as sour gas SO ₂ +CO ₂) Mainly collection of and also eliminating high frequency noise levels which accompany such equipment such as compressors, electric motors or pumps.	
Specific Benefit to Concern TUO obtained the following information and forwarded Mr. Nelson: 1. From Mr. Ken Patrick, Western Wood Products Assoc. Portland, Oregon, the following articles: a. "Planner Noise Control" b. "Control Programs in Place of Rhetoric" c. "Controlling Noise at the Source" d. "How to Buy Quiet Machine Tools" e. "Practical Engineering Controls for Noise Reduction" f. "11 Ways to Control Woodworking Noise" g. "Directory of Noise Control Products Part V: Acoustical Materials"	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	 SIGNATURE OF SBA REPRESENTATIVE S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Concerns

Mr. Ralph Nelson
H-Bon Engineering Co., Inc.
Midland, Texas

CASE #122-5

- h. "Enclosure Guide" prepared by U.S. Dept. Labor, Bureau of Labor Standards,
Pacific Regional Office, San Francisco, California.
- 2. From Office of Environmental Information and Media Center:
 - a. 8 searches on problem
 - b. Article entitled "Techniques for Reducing Machinery Noise."
- 3. From TUSC
 - a. Search of 39 abstracts relevant to measuring noise vibrations.
- 3. NASA Lit Search #10628 with 43 citations on "High Frequency Noise in
Compressors, Electrical Motors or Pumps"
- 4. From Environmental Protection Agency
 - a. 157 pp computer printout of abstracts relevant to problem.
- 5. From Defense Documentation Center
 - a. Report Bibliography Search Control #092390 entitled "Reduction Noise Level"

Copy of Complimentary letter is attached.

RECEIVED
MAR 12 1973
REGION VI - PMA

67

SYDNOR-BARENT SCANNER CORP.
3520 Pan American Freeway N.E.
Albuquerque, New Mexico 87107

9 March 1973

Mr. S. Charles Pierce
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pierce,

I'm sorry to be so slow in responding to you with comments on the OROS paper which you pried loose for us with so much effort. I know how it is to drop messages into a dark hole in the ground and never even hear a splash.

The information in the report is interesting chiefly as it confirms our expectations. It's a bit depressing, really, since we did essentially identical work with private money four years before this ONR contract was carried through. Teletron appears to have re-invented all over again the conventional servo-controlled optical record pickup that occurs to every electronic engineer when he starts to think about phonographs.

The videodisc systems developed by Phillips and MCA, much in the news lately, are surely greatly refined versions of this same basic technology. It's hard to figure out what Teletron is being so stuffy about.

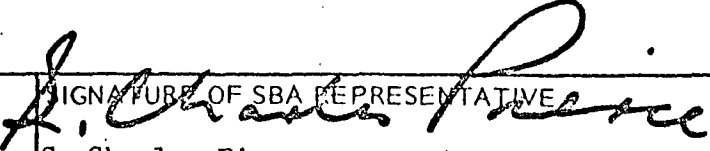
It is reassuring to know that nobody has stolen a march on us. I much appreciate your help.

Sincerely,


Iben Browning

IB/fab

Copy to: Mr. Robert L. Pou, Jr.
Small Business Administration
Region VI - PMA Division
1100 Commerce Street
Dallas, Texas 75202

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: 68 March 23, 1973
	Name and Address of Concern: (include ZIP code) Iben Browning, President Sydnor-Barent Scanner Corp. 3520 Pan American Freeway, N.E. Albuquerque, New Mexico 87107 CASE #112-16
Instructions: Forward original to Deputy Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contact through Plant Visit. Firm interested in optical recording and readout information. Especially technical information concerning optical phonograph needle being developed by the Navy. Current contract being performed by Teletron Data Corp. in Kings Park, N.Y.	
Specific Benefit to Concern The following information was obtained and forwarded to Mr. Browning: 1. Letter from Axel C. Ringe, Tech. Information Specialist of NTIS to the effect his collection contains no documents relevant to optical phonograph needles. 2. From TUSC a. Article entitled "Phillips TV disk, read by light beam, could shape market" Taken from Electronics Magazine, Sept. 11, 1972. b. Article entitled "Video disks look good for TV Playback" also from Electronics Magazine. Con't page 2	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

-2-

Iben Browning, President
Sydnor-Barent Scanner Corp.

REPORT OF PMA ASSISTANCE TO
SMALL BUSINESS CONCERNS

CASE #112-16

3. From Teletron Data Corp., Kings Park, N.Y., Annual Summary Report on the OROS and transmittal from Richard A. Lodwig, Technical Director, stating he would be in touch with TUO regarding public demonstration of experimental OROS hardware. TUO forwarded copy of letter to Mr. Browning.

Copy of complimentary letter is attached.



February 14, 1973

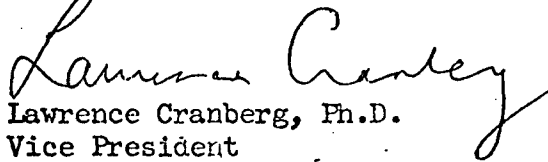
Mr. S. Charles Pierce
Small Business Administration
1111 Commerce Street
Dallas, Texas 75202

RECEIVED
FEB 15 1973
REGION VI - FBA

Dear Mr. Pierce:

I was extremely pleased to receive today the bibliography on ion sources. I am impressed by the speed with which we obtained this bibliography, its scope, and the format in which the material was presented. I am confident that this bibliography will be a very valuable resource for our R&D work on ion sources.

Sincerely,


Lawrence Cranberg, Ph.D.
Vice President

LC:jab



March 9, 1973

Mr. Robert L. Pou, Jr.
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pou:

Thank you for your letter of March 7, 1973, requesting an evaluation of bibliographic material furnished us by Mr. Charles Pierce concerning "ion sources for production and formation of ion beams."

The promptness of the response to my request was most gratifying. Mr. Pierce has been consistently most attentive and responsive to our requests. We received bibliographies from NASA, from the Defense Documentation Center, and the response to an in-house search request No. 903 dated February 5, 1973.

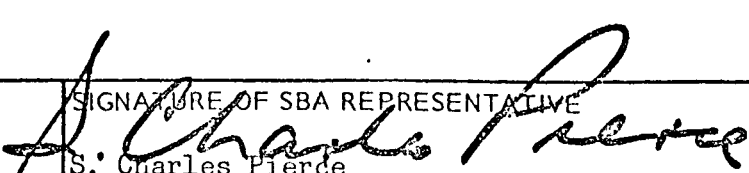
The most useful material was that furnished by NASA and I include a copy of the evaluation of the NASA effort, which I sent to them.

Sincerely yours,

Lawrence Cranberg, Ph.D.
Vice President

LC:jab
Enc.

RECEIVED
MAR 12 1973
REGION VI - PRMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: March 23, 1973
	Name and Address of Concern: (include ZIP code) Lawrence Cranberg, Ph.D. Vice President Accelerators, Inc. 212 Industrial Boulevard Austin, Texas 78704 CASE #013-18
Instructions: Forward original to Deputy Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contact through Plant Visit. This firm desires information on Ion sources for production and formation of Ion beams, especially, production of large currents of boron and phosphorus Ions.	
Specific Benefit to Concern TUO obtained and forwarded the following information to Dr. Cranberg: 1. NASA Lit Search #21312 of 98 citations on "Ion Sources" 2. Defense Documentation Center, Report Bibliography Search Control #095360 entitled "Ion Sources" 3. TUSC search of 30 abstracts on "Ion Sources for Production and formation of ion beams, especially production of large currents of boron and phosphorus ions!" Copy of complimentary letter is attached.	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr., Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.



GUS MANUFACTURING, INC.

P.O. Box 12338 • El Paso, Texas 79912 • Phone (915) 533-6202 • Telex 749-442

February 21, 1973

Mr. S.C. Pierce
Small Business Administration
1100 Commerce St.
Dallas, Texas 75202

Dear Mr. Pierce:

I certainly appreciate the speed with which you provided the required documentation on "Artillery Sound Ranging" and "Sonic Anemometers." These bibliographies represent a considerable savings of my time and are a very useful service to the small businessman. At this time, I do not plan to order any of the documents concerning the sonic anemometers. However, I have enclosed copies of five bibliographies concerning artillery sound ranging which I wish you could order for me.

Thanks again for your services. I plan to utilize them in all my future research projects.

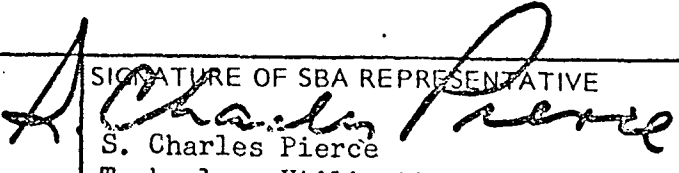
Sincerely,

Dan J. Ramsdale

Dan J. Ramsdale
Research Director

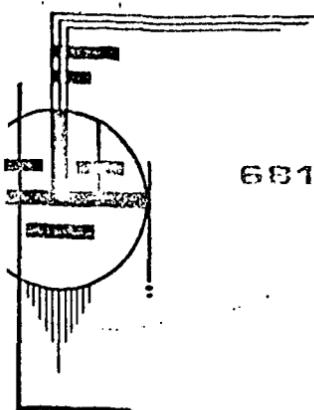
DJR:lf
Encl.

RECEIVED
FEB 23 1973
REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: March 23, 1973
	Name and Address of Concern: (include ZIP code) Dan Ramsdale Gus Manufacturing Company, Inc. 201 W. Baltimore El Paso, Texas 79902 CASE #023-9
Instructions: Forward original to Deputy Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contact was by telephone request. This firm wants information on sonic or acoustic anemometers or acoustic anemometers.	
Specific Benefit to Concern TUO obtained and forwarded the following information to Mr. Ramsdale. 1. TUSC search of 16 abstracts on sonic and acoustic anemometers. 2. NASA Lit Serach No. 21128 of 48 citations on "Sonic or Acoustic Anemometers" 3. DDC Report Bibliography, Search Control No. 094575 entitled "Anemometers" Copy of complimentary letter is attached.	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.



NU-PRO, Inc.

75

Fiberglass, Plastic and Recreation Products
6810 Central S.W., Albuquerque, N. M., 87105
505-855-9411

February 22, 1973

A. SIEGLITZ
President

L. CHAPMAN
Vice President

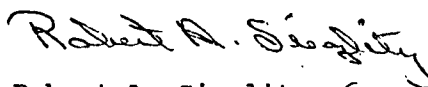
Mr. S. Charles Pierce
Technology Utilizations Officer
Small Business Administration
Region VI
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pierce:

Just a short note to thank you for sending us all of the information help on the Aerobic Sewage Systems. This material has been very useful for our present needs and will also be helpful in the future.

Thanks again.

Sincerely,



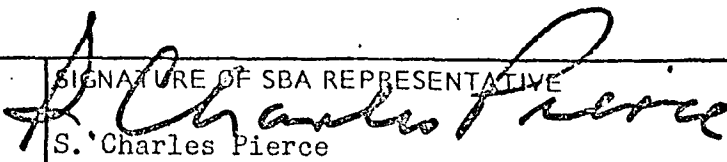
Robert A. Sieglitz (RS)
President

RAS;cs

RECEIVED

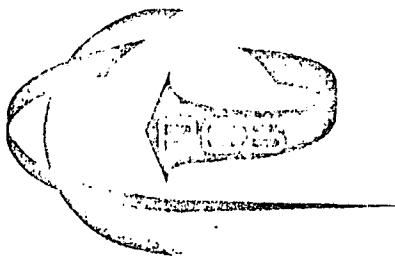
FEB 26 1973

REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: March 23, 1973 Name and Address of Concern: (include ZIP code) Mr. Robert A. Sieglitz NU-PRO, Inc. 6310 Central Ave., S.W. Albuquerque, New Mexico 87105
Description of SBA Assistance Original contact was by Letter Request. This firm has a new line of sewage disposal systems, aerobic systems. They desire all information available on aerobic sewage treatment.	
Specific Benefit to Concern TUO obtained and forwarded the following information to Mr. Sieglitz. 1. NASA Lit Search No. 21163 of 62 citations entitled "Aerobic Sewage Systems" 2. NASA search of abstracts with Tech Brief on "Metered Oxygen Supply Aids Treatment of Domestic Sewage" 3. TUSC search of publication available on "Aerobic Treatment of Fruit Processing Wastes" 4. DDC Report Bibliography Search Control 094726 entitled "Aerobic Sewage System" 5. Oklahoma Environmental Information and Media Center forwarded title search "Aerobic Sewage Systems"	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.



POLLUTION CONTROL SYSTEMS, inc.

Suite, 804, First National Bank Building East • 5301 Central Avenue N.E.
Albuquerque, New Mexico 87108 • Telephone (505) 265-5836

December 6, 1972

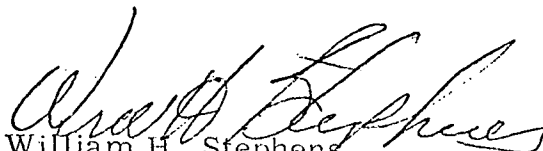
Robert L. Pou, Jr.
Chief, Procurement and Management
Assistance Division
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

RECEIVED
DEC 12 1972
REGION VI - PMA

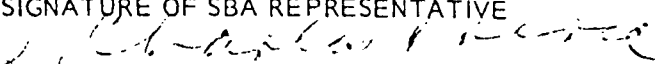
Dear Mr. Pou:

We have received the information supplied by Mr. Pierce. We find it very useful in our research and would like to encourage continuation of this type of service. Mr. Pierce has been most helpful in this regard.

Sincerely,


William H. Stephens
President

Reference your letter dated 4 December 1972.

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: January 5, 1973
	Name and Address of Concern: (include ZIP code) William H. Stephens, President Pollution Control Systems, Inc. Suite 804 First National Bank Building 5301 Central Avenue, N.E. Albuquerque, New Mexico 87108 CASE # 102-5 and 102-14
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	Description of SBA Assistance Original contact was made through Plant Visit. Case #102-5 - Firm desired information on sewage treatment in aeration or aerobic type septic systems. Also other types of individual sewage disposal systems. Case #102-14 - Firm desired information on water sterilization using ultra-violet or iodine purification as well as available information on Ozone purification. Also, information regarding purification of water from virus and other bacteria.
Specific Benefit to Concern On Case No. 102-5 the following information was forwarded: 1. From NTIS a. PB-1080500 "A study of the Biological Aspects of Failure of Septic Tanks Percolation Fields - First progress Report" b. Search of 40 abstracts related to subject of sewage disposal. c. PB-204519 entitled "Septic Tanks and The Environment" 2. From OEIMC a. 3-pp abstracts on Sewage Treatment b. An article entitled "Pollution and The Small Businessman" c. " " " " "Financing Municipal Treatment Plants" (Con't. page 2)	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Division

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Concerns

Mr. William H. Stephens, President
Pollution Control Systems, Inc.
Albuquerque, New Mexico

Continued Case No. 102-5

- d. 21-pp article on "Pollution Control Equipment for Industry and Municipalities Engineered with Aerators" Aqua-Aerobic, Rockford, Ill.
- e. 6-pp article "Independent Physical Chemical-Wastewater Treatment Systems" Met-Pro Water Treatment Corp.
- d. 6-pp "Tri-Stream Liquid Incinerator"
- e. 4-pp "Biopolymers of Activated Sludge" by Lowell L. Wallen and Edwin Davis, Northern Regional Research Lab, Peoria, Illinois.
- f. Search of 2 citations plus an article from December 1971 issue of Journal WPCF entitled "A Survey of Household Waste Treatment Systems"

3. From TUSC

- a. 3-abstracts related to Sewage Disposal systems
- b. 4 sources of publications available on "Sewer Use as to Regulations and Design"
- c. 15 citations on "Sewage Treatment on Aeration or Aerobic Type Septic Systems"
- d. A Manual on "Anaerobic Sludge Digestion now Available"
- e. 7 additional references from other publications.

4. From NTIS the following Documents

- a. PB-180500 "A study of the Biological Aspects of Failure of Septic Tank Percolation Fields - First Progress Report"
- b. PB-204519 entitled "Septic Tanks and The Environment"

5. From National Bureau of Standards:

- a. PB-180501 "Biological Aspects of Failure of Septic-Tank Percolation Systems"
- b. PB-180499 "A Study of Methods of Preventing Failure of Septic-Tank Percolation Systems"

6. NASA Literature Search #20119 of 92 citations entitled "Sewage Disposal Systems"

7. Defense Documentation, Cameron Station, Alexandria, Va. forwarded an 87 page search on Sewage Disposal Systems.

On Case #102-14, the following information was forwarded:

1. From TUSC

- a. 14-pp article "Increased Rate and Efficiency of Phenolic Waste Ozonization"
- b. 13 abstracts with 2 NASA TB's on water purification, and application of Ozone to water purification.
- c. 7-pp Abstracts and Reports on "Small Size Ozone Generators and Design"

2. NASA Literature Search #20099 of 64 citations on "Water Purification or Sterilization"

3. From OEIMC - Search #107 with 15 citations plus articles from May and June Pollution Engineering Manual entitled "Ozone-Friend or Foe?" and "Ozone-Antidote for Water Pollution"

Continued page 3

Continued Case #102-14 (Mr. William H. Stephens, Pollution Control Systems, Inc.)

4. From Water Resources Research Center, University of Tennessee
Publication PB-210857 Research Report No. 24 entitled "Virus Renoval--Water and Wastewater"
5. Report Bibliography from Defense Documentation Center, Cameron Station, Alexandria
entitled "Water Purification or Sterilization"
6. From U.S. Dept. Interior, Federal Water Quality Administration, Cinn.
Booklet entitled "Viruses in Waste, Renovated and other waters, 1969 Literature Abstracts"
7. From EPA, Water Quality Office, Cinn. a booklet entitled "Viruses in Waste, Renovate and other Waters, 1970 Literature Abstracts"

Copy of complimentary letter from Mr. Stephens is attached.



THUNDER SCIENTIFIC CORPORATION⁸¹

6 December 1972

Mr. Robert L. Pou, Jr.
Chief, Procurement and Management Assistance Division
Small Business Administration, Region VI
1100 Commerce Street
Dallas, TX 75202

Dear Mr. Pou:

The information we have received from your organization in the last few months has proved very useful, and is being presently incorporated into our manufacturing effort.

The help of Mr. Pierce and the Small Business Administration office is much appreciated.

Sincerely,

THUNDER SCIENTIFIC CORPORATION

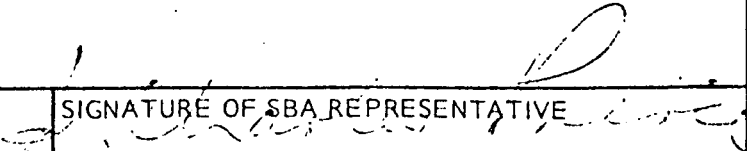
Al Shapolia
Chief Engineer

mat

RECEIVED

DEC 8 1972

REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: January 5, 1973
	Name and Address of Concern: <i>(include ZIP code)</i> Mr. Al Shapolia Thunder Scientific Corporation 623 Wyoming, S. E. Albuquerque, New Mexico 87123
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	Cases #102-16 and 102-17
Description of SBA Assistance Original contacts made through Plant Visit. On Case #102-16 - Firm was interested in locating information on drifting DC Amplifiers or low drift DC Amplifiers. On Case #102-17 Firm was interested in electronic circuits involving solid state humidity sensors. Also, any alarm systems which may be involved in solid state humidity sensors.	
Specific Benefit to Concern On Case #102-16, the following information was obtained and forwarded to Mr. Shapolia. 1. NTIS search of 23 abstracts on "Drifting DC Amplifiers or Low Drift DC Amplifiers" 2. Defense Documentation Center, Report Bibliography "Drifting DC Amplifiers" 3. From TUSC: a. 3 NASA Tech Briefs" 6610591 "Electronic Circuit Profices Accurate Sensing and Control DC Voltage" 6810003 "Linear Analog DC Voltage-to-Pulse-Width Converter" 6510105 "Variable Load Automatically Tests DC Power Supplies" b. 13 abstracts relative to Drifting DC and Low Drift Amplifiers. 4. NASA Literature Search 20113 of 18 citations on "Drifting DC Amplifiers"	
Savings to Government, If Any (Be Specific) Continued page 2 on case #102-17 ✓ Copy of complimentary letter from Mr. Shapolia is attached. NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

-2-

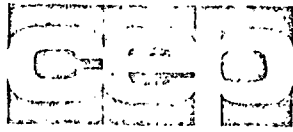
Report of PMA Assistance to
Small Business Concerns

Mr. Al Shapolia
Thunder Scientific Corporation
Albuquerque, New Mexico

Case #102-17, the following information was forwarded:

1. From NTIS
 - a. 7 abstracts on "Electronic Circuits used in Solid State Humidity Sensors"
 - b. Document N66-33499 entitled "Thermally Regenerable Carbon Dioxide Absorbent"
2. From Defense Documentation Center, a bibliography No. 089142 approximately 1/4" thick entitled "SS Humidity Sensors"
3. NASA Literature Search #20095 entitled "Solid State Humidity Sensors"
4. TUSC search of 7 abstracts relative to subject
5. National Bureau of Standards document N69-31687 entitled "Quarterly Status Report #3 Silicon Surface Passivation for Devices NASA Research Grant" by Alan B. Kuper, et al.
6. From American Institute of Aeronautics and Astronautics:
 - a. Report A65-13280 "Miniature Solid-State Dew Point Sensor by Arthur Bisberg, Chief Engineer, Cambridge Systems, Inc., Newton, Mass.
 - b. Report A71-25244 entitled "No. 159 Calibration of Low H₂O Meter" by D. P. Cruikshank and A. B. Thomson.

Copy of complimentary letter is attached.



Controls for Environmental Pollution, Inc.

1925 Rosina • P. O. Box 5351 • Santa Fe, New Mexico 87501 • Telephone 505/982-9841

December 7, 1972

Mr. Robert L. Pou, Jr.
Chief, Procurement & Management
Assistance Division
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

RECEIVED
DEC 12 1972
REGION VI - PMA

Dear Mr. Pou, Jr.:

The information I received concerning 1) Electro deposition of Americium, 2) Methods used to separate strontium, barium and calcium, 3) Solid State Beta Detector with Ancillary equipment was in good form and quite usable.

I have found the information from items 1 and 2 above quite useful. I have not had the time to completely evaluate the information from item 3, but I am sure it will be as helpful as the others.

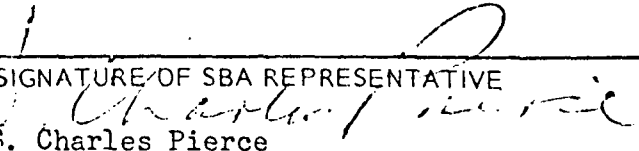
The only improvement I could possibly suggest would be the reduction of non relevant material. I realize this may be difficult to accomplish and may be my fault for giving an inaccurate synopsis of my requirements. As far as I am concerned the information I received was more than I expected, quite thorough and very useful.

Very truly yours,

CONTROLS FOR ENVIRONMENTAL POLLUTION, INC.

Ted E. Rekart
Environmental Chemist

TER:11

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: January 8, 1973
	Name and Address of Concern: (include ZIP code) Mr. Ted Rekart Environmental Chemist Controls for Environmental Pollution, Inc. P.O. Box 5351 Santa Fe, New Mexico 87501 CASE #102-7, 102-8 and 112-5
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	
Description of SBA Assistance Original contact made through Plant Visit <u>Case #102-1</u> This firm is trying to locate information on the electro deposition of Americium without using dimethylsulfoxide. They are also looking for analytical methods involving Americium 241. <u>Case #102-8</u> Firm wants information on methods used to separate strontium, barium and calciu. Especially interested to know if there is some method they have overlooked such as solvent extracting. Also interested to know about electroplating strontium out of mixture. <u>Case #112-5</u> Firm wants information on the development of a Solid State Beta Detector with Ancillary Equipment with a range of 0.5 mev. to 2.5 mev. The information is needed for applications and beta spectrometry.	
Specific Benefit to Concern <u>Case #102-1</u> -The following information was forwarded: 1. NTIS search of 15 abstracts on "Americium" 2. Defense Documentation Center Search on "Electrodeposition of Americium" 3. NASA Literature Search No. 20094 on "Electrodeposition of Americium" <u>Case #102-8</u> - The following information was forwarded: 1. From NTIS a. 16 abstracts on separation of strontium, barium and calcium from environmental samples such as milk, soils, water, fish or other animal tissue. <div style="text-align: right;">Continued page 2</div>	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

-2-

Report of PMA Assistance to
Small Business Concerns

Mr. Ted Rekart
Environmental Chemist
Controls for Environmental Pollution
Santa Fe, New Mexico

Cases 102-7, 102-8 and 112-5

Continued Case 102-8

- b. From Health and Safety Lab. U.S. Atomic Energy Commission, New York City,
Manual HASL-300 on Procedures edited by John H. Harley.

Case #112-5 The following information was forwarded:

1. NTIS report of 41 abstracts on development and design of solid state beta detector within ancillary equipment with range of 0.5 mev. up to 2.5 mev.
2. Report Bibliography from Defense Documentation Center entitled "Solid State Beta Detectors"
3. NASA Literature Search No. 20122 of 33 citations on "Solid State Beta Detector"
4. TUSC Literature Search No. 826 with 36 citations entitled "Design and Development of Solid State Beta Detector"

Copy of complimentary letter is attached.

S D C

... designers and manufacturers of electro-optical systems ...

December 19, 1972

Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

RECEIVED
DEC 22 1972
REGION VI - PMA

Attention: Mr. Charles Pierce

Dear Mr. Pierce:

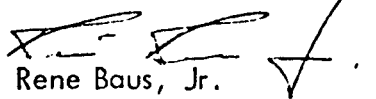
I have applied for a patent on a display device that is intended to facilitate the use of the present LORAN and DECCA navigational systems for aircraft and ships. Unlike existing LORAN receivers, which require that the operator take two readings and translate these readings into a coordinate position by means of LORAN charts or tables, my device automatically and continuously displays the ships position and previous course on a Mercator chart -- the operator simply looks at the display to determine his position.

Although I am in the early stages of developing this system, I feel that I will be able to market a LORAN system which includes this display for a price that is competitive with existing commercial LORAN receivers -- say, less than \$1,000.

“ In any event, I would like to employ your services again to obtain for me a bibliography on government publications in this field; e.g., LORAN; GEE, and DECCA, (British hyperbolic navigation systems); LORAC: Hyperbolic RAYDIST: CONSOL; SOFAR; RAFOS; and particularly display devices (if any) used in conjunction with these systems. Information on the theory and practice of LORAN would be most helpful. ”

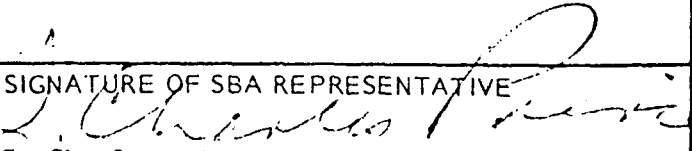
I greatly appreciate your past help in supplying me with information on fuel cells; the local company for whom I collected this information is actively pursuing the possibility of developing a fuel cell intended for use on off-shore oil production rigs. The information you supplied has been invaluable to them.

Very truly yours,


Rene Baus, Jr.
President

RBjr/hbt

Scientific Design Corporation
5404 Saint Charles Avenue
New Orleans, Louisiana 70115

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: January 8, 1973
	Name and Address of Concern: (include ZIP code) Mr. Rene Baus, Jr. KALVAR Corporation 800 S. Jefferson Davis Highway New Orleans, Louisiana 70125
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	CASE #072-1
Description of SBA Assistance Original contact was by Letter Inquiry. This firm desired information on the theory, design and construction of fuel cells.	
Specific Benefit to Concern The following information was obtained and forwarded Mr. Baus: 1. From NTIS a. 100 abstracts related to Fuel Cells b. Document AD-864962 entitled "A Survey of Advanced Energy Conversion Systems and Their Applicability to Army Aircraft Propulsion Requirements" c. Document N71-12272 "Capillary Matrix and Fuel Cell Development Study" d. Document AD-730796 "1.5 KW Fuel Cell Powerplant" e. Fast Announcement "Power Source Devices" f. Document AD-742263 "Study of Degradation of Platinum Black Fuel Cell Cathodes" <div style="text-align: right;">(continued Page 2)</div>	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief, PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

-2-

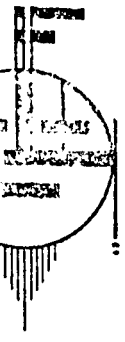
Report of PMA Assistance to
Small Business Concerns

Mr. Rene Baus, Jr.
KALVAR Corporation
New Orleans, La.

Continued NTIS Material forwarded to Mr. Baus

- g. Document AD-484197 "Final Technical Report on the Silent, 3.75 Kw,
Liquid Hydrocarbon-Air Fuel Cell Powerplant"
- h. Document AD-821662 "Evaluation of Fuel Cell Electrodes"
- 2. From NASA
Tech Brief 72-10221 entitled "Silver-Chlorine Fuel Cell - A Concept"
- 3. From TUSC - Search of 22 abstracts on "State of the Art in Design, Construction and
Theory of Fuel Cells."

Copy of complimentary letter is attached.



NU-PRO, Inc.

Fiberglass, Plastic and Recreation Products

6810 Central S.W., Albuquerque, N. M., 87105

505-855-2411

January 12, 1973

90

J. Pou
2. Pou

SIEGLITZ
dent
CHAPMAN
President

Mr. Robert L. Pou, Jr.
Chief, PMA Division
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pou:

I would like to thank you very much for sending us all of the information on the Fish culture in fiberglass tanks and Individual sewage disposal systems. I have found all of this information very usefull to our company.

We now have a new line of sewage systems, it is an Aerobic System. Any information that you may have on this, would be deeply appreciated.

Sincerely,

Robert A. Sieglitz
CS.

Robert A. Sieglitz
President

RAS:cs

RECEIVED
JAN 15 1973
REGION VI - PMA

AUTOTRONIC CONTROLS CORPORATION

91

6908 COMMERCE, EL PASO, TEXAS 79915 915 772-7431

March 9, 1973

Ref: 2-61

Small Business Administration
Region VI PMA Division
1100 Commerce Street
Dallas, Texas 75202

Attn: Mr. Robert L. Pou, Jr.

Subject: SBA supplied information

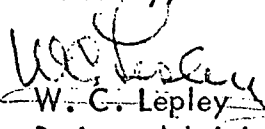
Reference: Letter, Mr. Robert L. Pou, Jr., to Mr. Jack C. Priegel
dated March 6, 1973, same subject

Dear Mr. Pou:

The information referred to in referenced letter was received and was very useful to our Corporation.

Our thanks to you and the Small Business Administration. We hope that future requests for technical information will be as promptly fulfilled and materials received as useable as that recently received.

Sincerely,


W. C. Lepley


Business Administration Manager

WCL/pl

RECEIVED

MAR 14 1973

REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: April 17, 1973
	Name and Address of Concern: (include ZIP code) Mr. Jack C. Priegel Autotronic Controls Corporation 6908 Commerce El Paso, Texas 79915
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	CASE #013-12
Description of SBA Assistance Original contact through Plant Visit. This company has been doing research in product development in the area of auto emission in the pollution control field. They are especially interested now in information regarding potential impact of aircraft emission and to know if any standards have been set by EPA for aircraft emission from exhaust.	
Specific Benefit to Concern The following information was received and forwarded to Mr. Priegel: 1. FROM EPA A. News letter for release 12/4/72 on Air Pollution Standards for Aircraft" with attached chart on EPA proposal by dates of Jan. 1, 1974, 1976 and 1979. B. EPA Computer Printout of 183-pp from APTIC Research Triangle Park, N.C. on "Developments on Electrochemical Energy-Conversion Devices, Batteries and Fuel Cells" 2. Defense Documentation Center Report Bibliography No.093614 "Aircraft Exhaust Emissions"	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Concerns

Mr. Jack C. Priegel
Autotronic Controls Corporation
El Paso, Texas

CASE #013-12

3. From NTIS
 - a. PB-205760 "Automobiles Exhaust Emissions Bibliography"
 - b. PB-208194 "Estimating Auto Emissions of Alternative Transportation Systems"
 - c. PB 208950 "The Potential Impact of Aircraft Emissions upon Air Quality"
 - d. PB-209258 "The Economic Effectiveness of Mandatory Engine Maintenance for Reducing Exhaust Emissions"
 - e. 55 abstracts NTIS-PK 102 "Nitrogen Oxides in Air Pollution"
 - f. 70 abstracts NTIS PK 117 "Automobile Exhaust Studies"
 - g. PB-198699 "Study of Jet Aircraft Emissions and Air Quality in the Vicinity of Los Angeles International Airport"
 - h. PB-209559 "Compilation of Air Pollutant Emission Factors."
4. From TUSC
 - a. 22 abstracts and NASA TB B72-10434 "Air Assist Fuel Nozzle Reduces Aircraft Gas Turbine Engine Emissions at Idle Operation"
 - b. 13 pp NASA CR-1809 Joint DOT-NASA Civil Aviation R&D Policy Study, Vol 11 Appendices B thru 1 "A Historical Study of the Benefits Derived from Application of Technical Advances to Civil Aviation"
5. NASA Lit Search of 18 citations, Search No. 20898 "Aircraft Exhaust Emission Control Devices, Batteries and Fuel Cells"
6. Notice of Public Hearing by Texas Air Control Board on Revision of rules and regulations for the State of Texas by Charles R. Barden, P.E. Executive Secretary. This gave a Dec. 27, 1972 Draft of general rules with definitions; Regulation IV - control of Air Pollution from motor vehicles, regulation V on control of air pollution from carbon compounds.

Copy of complimentary letter is attached.



UTEX INDUSTRIES, INC.

5200 CLINTON DRIVE • HOUSTON, TEXAS 77020 • 713 - 672-8321

94

March 16, 1973

RECEIVED

MAR 19 1973

REGION VI - PMA

Mr. S. C. Pierce
Small Business Administration
1100 Commerce St.
Dallas, Texas 75202

Dear Sir:

After having studied the two literature searches that I received, I have found several articles which would appear to provide useful knowledge for our company. As you had mentioned that you might be able to obtain several reports at no charge, I have listed below the accession numbers of those articles aforementioned.

A69-35534
A73-13027
A69-32432
N72-12422
N70-12565
N66-12366

I would like to thank you for your assistance in obtaining these searches for us, we have found them quite useful and will continue to use them in the future.


Sincerely Yours,

UTEX INDUSTRIES, INC.

Fred B. Pippert
Project Engineer

FBP:vd

Copy to...

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: April 17, 1973
	Name and Address of Concern: (include ZIP code) Mr. Fred Pippert UTEX Industries, Inc. 5200 Clinton Drive Houston, Texas 77020 CASE #043-11
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	Description of SBA Assistance Original contact through NASA/SP-5905(3) Firm desires information on sealing techniques using molded rubber, especially nitroles, butons, butyls, ethylene propylene and epichlorohydrin (low base elastomers). Any information on compounding rubber with low base elastomers would be helpful.
Specific Benefit to Concern The following information was obtained and forwarded Mr. Pippert: 1. AIAA publications by the McDonnell Douglas Astronautics Co., Santa Monica, Cal. and Mobility Equipment Research and Development Center, Fort Belvoir, Va. a. A69-35534 "Epichlorohydrin-Ethylene Oxide Rubber in Seals" b. A69-32432 "Specifying Hardness of Elastomers for Rotary Shaft Seals" c. A73-13027 "The Effect of Environmental Factors on Seal performance of Viton E-60 Fluoroelastomer" 2. TUSC a. 29 abstracts relative to above problem. b. 4-pp article "Thermodynamic Properties of Polymers Part 4, Ethylene-Propylene	
Savings to Government, If Any (Be Specific) Copolymer" NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief PMA Division Region VI, Dallas	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Continued
Report of PMA Assistance to
Small Business Concerns

Mr. Fred Pippert
UTEX Industries
Houston, Tx.
CASE #043-11

3. NTIS Document N72-12422 "Seal Material Development Test Program"
4. NASA Lit Search 21671 of 132 citations "Sealing Techniques Using Rubber or Elastomers"
5. From Defense Documentation Center
 - a. Report Bibliography B97059 2 $\frac{1}{2}$ " thick "Sealing Techniques"
 - b. " " " A97059 of 50-pp "Sealing Techniques W/Molded Elastomers"
 - c. Document AD693195 - Boeing Scientific Research Lab. Document entitled "The Theory of Plane Elastic Deformation Applied to the Compression of Rubber Seals"
 - d. Document AD621779 "Method of Bonding Rubber to Metal" Foreign Technology Division, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio.

Copy of complimentary letter from Mr. Pippert is attached.

Austin Science Associates, Inc.

BEE CAVES AT WEST LOOP
P. O. BOX 7728
AUSTIN, TEXAS 78712
AREA CODE 512 - 327-1297

February 6, 1973

Mr. Robert L. Pou, Jr.
Small Business Administration
1100 Commerce Street
Dallas, Texas 75202

Dear Mr. Pou:

The information provided by Mr. Pierce in the areas we requested was, as usual, exceedingly helpful. He obviously put a good deal of time, effort and thought into the gathering of this material and it was appropriate, effective and useful.

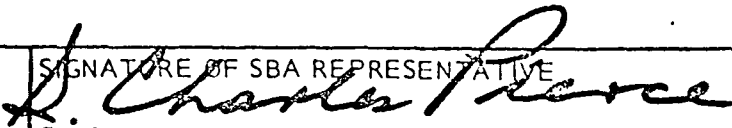
Mr. Pierce and the Technology Program have been a real boon to us and we certainly encourage the continuation and, perhaps, extension of this program. We will be happy to give whatever moral or other assistance is useful toward this end.

Sincerely,

R. A. Mazak
Dr. R. A. Mazak
Vice-president

RAM:sm

RECEIVED
FEB 7 1973
REGION VI - PMA

REPORT OF PMA ASSISTANCE TO SMALL BUSINESS CONCERNS	Date: February 12, 1973
	Name and Address of Concern: (include ZIP code) Richard Mazak, Ph.D. Austin Science Associates, Inc. P.O. Box 7728 Austin, Texas 78712
Instructions: Forward original to Associate Administrator, Procurement and Management Assistance, Washington, D. C. 20416	Case #112-12
Description of SBA Assistance Original contact through Telephone Inquiry This firm needed all technical information possible on electronic security systems, burglar alarms, intrusion detectors, acoustic ranging and security alarms.	
Specific Benefit to Concern The following information was obtained and forwarded Dr. Mazak. 1. From NTIS a. Document JPRS-32724 "Accuracy of Points Determined in Pulsed-Sound Range Finder Measurements by the Mean Square and Elliptical Errors Methods" by M. Ye. Lyenko, USSR b. PB-197556 "A Survey of Techniques used to Reduce Vandalism and Delinquency in Schools" c. PB-185176 "1969 Carnahan Conference on Electronic Crime Countermeasures" d. AD-731075 "Ultrasound Dosage for Experimental Use of Human Beings" (Research report, Naval Medical Research Institute) (con't page 2)	
Savings to Government, If Any (Be Specific) NA	
Other Benefits to Government NA	
FROM: Robert L. Pou, Jr. Chief PMA Division Dallas Region VI	SIGNATURE OF SBA REPRESENTATIVE  S. Charles Pierce Technology Utilization Officer

USE OPPOSITE SIDE OF THIS FORM IF ADDITIONAL SPACE IS REQUIRED

If letters of commendation are received in connection with assistance rendered by SBA, please forward a copy of such letters with this report.

Report of PMA Assistance to
Small Business Concerns

Richard Mazak, Ph.D.
Austin Science Associates, Inc.
Austin, Texas

Continued Information from NTIS

- e. AD-691738 "Detection and Identification of Chemical Signatures"
(Report IITRI C6903-13, Ballistic Research Lab., Aberdeen Proving Ground, Md.)
 - f. AD-628245 "Fourth Quarterly Status Report on "Applicability of Olfactory Transducers to The Detection of Human Beings"
 - g. AD-844913 Technical Report 68-12 "Ultrasonic Receiver and Transmitter"
U.S. Army Limited War Lab., Aberdeen Proving Ground Md.
 - h. Search No. 2353 "Footstep Detectors involving Piezo-Electronic Devices, Pressure Transducers, or Seismic Sensors"
 - i. Search No. 2351 "Electronic Security Devices, Electronic Surveillance, Perimeter Protection, or fence Protection"
2. NASA Lit Search No. 20111 entitled "Electronic Security Devices"
3. Defense Documentation Center Search No. 089434 entitled "Electronic Security Devices "
4. From TUSC
- a. Search #818 "Footstep deectors involving Piezo-electronic Devices, Pressure Transducers, or Seismic Sensors"
 - b. Search #817 "Electronic Security Devices, Electronic Surveillance, Perimeter Protection, or fence Protection"

Copy of complimentary letter from Dr. Mazak is attached.

JAMES M. BIRD
6737 EAST 12TH STREET
TULSA, OKLAHOMA 74112

Rec'd
3-6-73

March 5, 1973

Mr. A. M. Moore
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Augie

As always you came through wonderfully for us
and I appreciate your help.

I had hoped that because this was a government
job that there might be some kind of a technical report
available.

We have a growing requirement to put some light
weight geophysical equipment through heavily wooded
areas. In these days one must not cut down a tree or
stir up the ecologh and we were exploring the possibil-
ity of a Gyro stabilized vehicle.

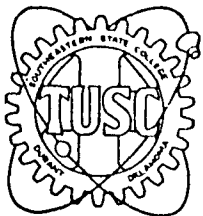
We have had such bad luck in the past trying to
deal with Uncle Sam, that I wouldn't go out of my way
to make anything for them.

I thought you might be interested in our latest
brochure. Our vehicle is beginning to be accepted now
in spite of it's rather unconventional design.

Much obliged,

James M. Bird

JMB:mc



TECHNOLOGY USE STUDIES CENTER

AREA CODE 405 / 924-5452

SOUTHEASTERN STATE COLLEGE

DURANT, OKLAHOMA 74701

101

Assistance

February 26, 1973

to speed the use of knowledge a cooperative effort of the University of Oklahoma, Oklahoma State University, and Southeastern State College

Mr. James M. Bird
Industrial Vehicles, Inc.
6737 East 12th Street
Tulsa, OK 74112

Dear Mr. Bird:

We received your letter dated February 12 this date. We feared that there had been a delay in the mail, and I called this information to Merle Christ.

I talked with Mr. David Rising, Assistant to the Director, for the development of the "Hydrostatic Vehicle." He still exhibits enthusiasm for the vehicle and believes that his director would welcome a proposal for the development of a vehicle. Their technical problem with the Summers Gyro Car Co. involved leakage of hydraulic fluid from the drive motor on the gyro wheel into the housing around the gyro. He tried to evacuate the housing and this imposed an additional load on the seals between the motor and the housing. The wheels were too small for the load imposed and thus obviated any advantage of a trail vehicle.

Rising believes there is a place in the Forest Service for a stabilized hydrostatic two-wheel vehicle. You will find the complete address of the director of this program listed below. I trust this information is of interest and that we may be of further service to you.

Sincerely,

A. M. Moore
Industrial Specialist

AMM:vd

Farnum Burbank, Director
Equipment Development Center
USDA Forest Service
Fort Missoula, Montana 59801

Telephone: 406/549-6511, Ext. 2777

INDUSTRIAL VEHICLES INC.

JAMES M. BIRD

6737 EAST 12TH STREET

TULSA, OKLAHOMA 74112

*Torrey Burbank**Director,**Equip Dev Center**USDA**Mr. A. M. Moore**3236 E. 15th Street**Durant, Oklahoma 74701*

February 12, 1973

Dear Mr. Moore:

Mr. Jim Bird ask me to contact you for any information you may be able to give us about the hydrostatic vehicle described in the enclosed article.

We tried contacting the Gyro Car Co. in Thousand Oaks, California and learned they are no longer listed.

Mr. Bird is anxious to make contact with anyone who will have information concerning the development of the described vehicle.

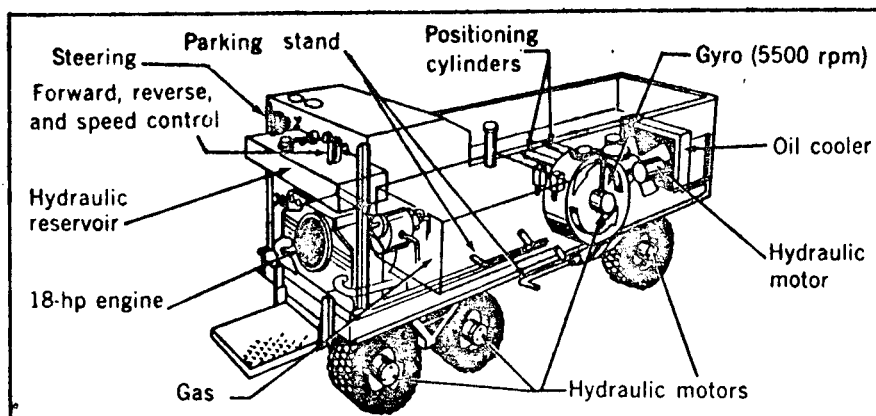
Any help you can give us in obtaining this information will be appreciated.

Very truly yours,

*Merle Christ*Merle Christ,
Secretary

enclosure

*406-549-6511**549-6511 Ext 2777**David Kising*



Traveling hydraulics show would be an appropriate name for this un-tippable woodland-type wheelbarrow. Even its cooling fan is hydraulically driven.

Hydrostatic vehicle carries heavy payload through forests

The U.S. Forest Service is developing a new type of trail vehicle which it hopes will be suitable for mining companies that would prefer to move ore out of wilderness areas without marring the land.

Several prototypes, hydrostatically driven, have already been carried to the test stage (photo and drawings) at the Service's equipment development center (Missoula, Mont.). Work is now under way on a third unit. Summers Gyro Car Co. (Thousand Oaks, Calif.) is working with the Forest Service.

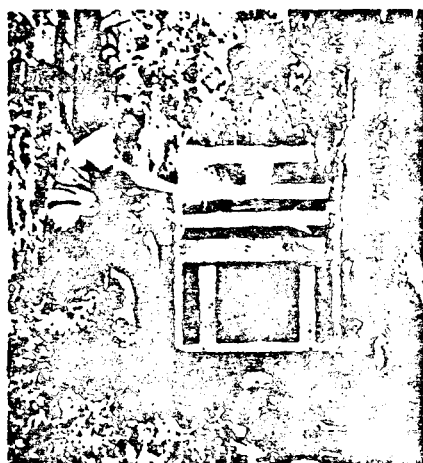
Trail blazer. The goal of the project is to come up with a vehicle that can operate on a trail rather than a road.

The first mining company likely

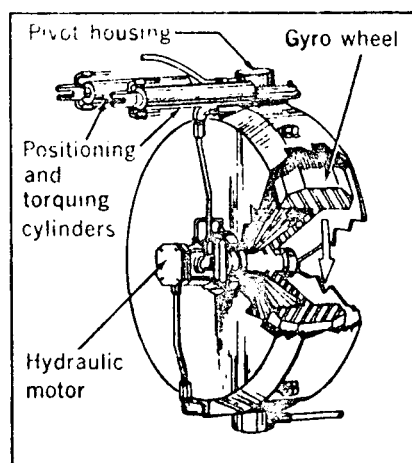
to use the vehicle is the Cougar Development Corp. (Seattle, Wash.), which has patented mining claims of about 40 acres in the LaBohn Gap wilderness area east of Seattle. The company has agreed to delay ore removal for two years, pending development of a trail vehicle.

The vehicle is a gyro-stabilized cargo carrier towing three trailers, capable of carrying a total of $7\frac{1}{2}$ tons of ore. Only 32 in. wide, the carrier travels on wheels arranged in a single track. The prototype can carry a payload of up to 800 lb. over forest trails at 5 mph, held upright by the powerful gyroscope. (5.51; 11.4)

—Ray Bloomberg,
McGraw-Hill World News,
Seattle



Hydrostatic wheels propel, and hydrostatic gyro balances versatile vehicle.



Gyro wheel weighs 180 lb. and keeps vehicle upright despite operator's motion.

ope are index code numbers. For a copy of index code, circle 600.

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best available copy.



THE RADIATION and MEDICAL RESEARCH FOUNDATION
of the SOUTHWEST

104

1425 East Enderly Place ■ Fort Worth, Texas 76104 ■ 817-923-7393

February 2, 1973

Rec'd
12-7-73

Mr. Bill Dodd
Southeastern State College
Durant, Oklahoma

Dear Mr. Dodd:

Just a short note to let you know I received the most valuable and interesting material you sent regarding the work being done by your research department. Information such as this is always most welcomed, as research is truly a vital factor to progress, if not the most important. It is most gratifying when someone such as yourself takes the time and effort to make this information available to others.

My best wishes to your research department in all they are striving to attain, and my sincere thanks for your thoughtfulness in sending the literature.

Respectfully,

C. H. Tseng

C. H. Tseng, M.D.

CHT/cj

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TECHNOLOGY USE STUDIES CENTER

AREA CODE 405 / 924-5482

SOUTHEASTERN STATE COLLEGE

DURANT, OKLAHOMA 74701

February 2, 1973

Mrs. Florence Johnston, Clerk
LeFlore County Health Department
County Building
Poteau, Oklahoma 74953

Dear Mrs. Johnston:

We are sorry we have been so long in answering your letter of January 2. We have not updated the material due to lack of contracting funds.

We appreciate your stating that you found the LeFlore County book to be of great value. We wish we could help you further.

Sincerely,

Velma Dittmar (Mrs.)
Administrative Assistant

VD:wd

LEFLORE COUNTY HEALTH DEPARTMENT
COUNTY BUILDING
POTEAU, OKLAHOMA 74953

L A K E W I S T E R

January 2, 1972

Richard W. Poole
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma

Dear Doctor Poole:

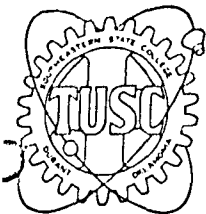
We have your book 'Human and Material Resources of LeFlore County' which was published in 1965. We have found this book to be of great value to the Health Department. Do you have a later issue? If so, and you could send us one at your very earliest convenience, we will be glad to pay for it. Just send us a statement to the amount when you send the book and we will pay you.

Sincerely,

Florence Johnston

Florence Johnston, Clerk



**TECHNOLOGY USE STUDIES CENTER**

AREA CODE 405 / 924-5452

SOUTHEASTERN STATE COLLEGE

DURANT, OKLAHOMA 74701

speed the use of knowledge - a cooperative effort of the University of Oklahoma, Oklahoma State University, and Southern State College.

MEMORANDUM**TO: Dr. Ronald Menzel****DATE: February 2, 1973****FROM: Bill Dodd****SUBJECT: Oklahoma City Municipal Reservoirs**

The attached letter from the Oklahoma City Director of Planning is enclosed for your information. As I understand the "problem," Mr. Painter is merely looking for help in compiling a bibliography on the four (4) water-oriented topics. As far as the TUSC data bank is concerned, the category of information is somewhat askew from typical technology utilization information requests.

However, a major element of our contract work statement is that we cooperate with other agencies in order to accomplish our service function -- would you please give us a recommendation on this request and/or suggest bibliographies appropriate to the need.

Thank you.

BD:vd

Attachment

*Sent to
State Resource Librarian
US Dept of Interior*

CITY of OKLAHOMA CITY

OKLAHOMA CITY, 73102

MUNICIPAL BUILDING

200 NORTH WALKER

January 29, 1973

**Mayor**

PATIENCE LATTING

Councilmen

GEORGE N. STURM

EUGENE H. MATHEWS

NELSON E. KELLER

BILL H. BISHOP

JOHN M. SMITH

KEN BOYER

DELBERT BURNETT

STEWART E. MEYERS, SR.

City Manager

N. ROSS

Mr. Henry C. Gold, Director
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Mr. Gold:

Your help has been so useful in furthering our past research efforts that we wish to ask your assistance once again.

My staff is presently undertaking an ambitious attempt to develop site and land use plans for the three municipal reservoirs in Oklahoma City. Pursuant to this task, we are in need of information in the following categories:

- (1) Site requirements of water oriented recreation facilities, i.e., what areas and arrangements are required for the efficient development and operation of fishing piers, sail-boat docks, motor launch docks, beaches and other supporting facilities.
- (2) Techniques of wide-area planning for water-oriented recreation, i.e., what factors become important in balancing concern with water quality and the protection of the natural environment with intensive usage implied by recreational usage?

RECEIVED

JAN 31 1973

TUSC

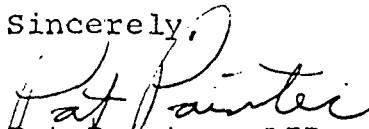
Mr. Henry C. Gold
January 29, 1973
Page 2

- (3) Plant types that are amenable to low maintenance growth in the Central Oklahoma area.
- (4) Landscaping techniques in water-oriented recreation projects.

I would appreciate your assistance in compiling a bibliography on these topics.

Thank you for your help.

Sincerely,

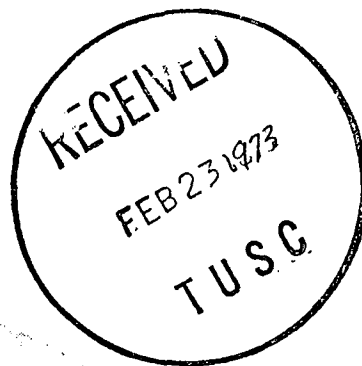

Pat Painter, AIP
Director of Planning

PP:BW:wh



Durant Chamber of Commerce

505 W. MAIN ★ P. O. BOX 517 ★ DURANT, OKLAHOMA 74701 ★ PHONE AC405 924-0848



February 20, 1973

Dr. C. Henry Gold
TUSC
Southeastern State College
Durant, Oklahoma

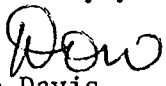
Dear Henry:

We take this opportunity to thank you for a job well done as Master of Ceremonies of our Annual Banquet. Thanks to your efforts we stayed on schedule and the banquet moved along very smoothly.

The more I work with you, the more I realize how much I can learn by the way you conduct yourself.

If I can be of service to you, please call upon me.

Sincerely yours,


Don Davis
Manager

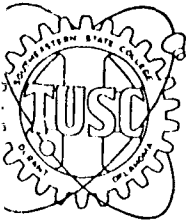
DD/bls

DURANT CENTENNIAL CELEBRATION JUNE 9-16

— THE GATEWAY TO TEXOMA —

APPENDIX C

SMALL BUSINESS ADMINISTRATION TU CORRESPONDENCE

**TECHNOLOGY USE STUDIES CENTER**AREA CODE 405 / 924-0121
Ext. 2517

SOUTHEASTERN STATE COLLEGE

DURANT, OKLAHOMA 74701

February 21, 1973

The Honorable Carl Albert
Speaker of the House
U. S. House of Representatives
Capitol Building
Washington, D.C. 20515

Dear Speaker Albert:

We are writing this letter to reappraise you and your staff of a productive working relationship between the NASA-sponsored Technology Use Studies Center, Southeastern State College, Durant, Oklahoma, and the Small Business Administration's Southwest Regional Technology Utilization Officer, Mr. S. Charles Pierce.

Mr. Pierce, who resides in Dallas, covers the five-state Southwest Region. Because of his location, Mr. Pierce is a frequent user of TUSC services. This is most appropriate for us because we are assigned in our Statement of Work to achieve interface with other government agencies. Through this contact, a vital NASA-SBA technology utilization agency interface has been achieved.

In his role as an SBA-TU Officer, Mr. Pierce has a natural and direct access to assist small business firms. This is true particularly because of the "banker's role" enjoyed by SBA personnel as they work to assist loan clients. It has been our observation that Mr. Pierce has the sincere desire to serve, a broad technical knowledge, a warm personality, plus the energy and initiative to enhance the unique relationship that the SBA has established in working with the small, independent-in-attitude businessmen. Moreover, it is through Mr. Pierce and others like him that such businessmen have realized the availability and accessibility of the data to be gained from the banks of knowledge of NASA and other government agencies.

It has been our experience to note that Mr. Pierce deals with clientele that have the capability to use sophisticated data but who do not have the facilities or the time to do primary research or even attempt to retrieve the latest findings of research. It has further been our observation that when such "new knowledge" is made available to these clientele that they become eager innovators in the use of "new knowledge" as they apply it to their fields of endeavor. Mr. Pierce is the necessary liaison or ombudsman

The Honorable Carl Albert

-2-

February 21, 1973

who links the small businessman to the vast banks of knowledge available to them.

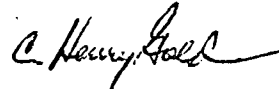
TUSC had an agency interface with Mr. Bruce Gipson, Mr. Pierce's predecessor. Eleven TUSC data searches were made for him between Sept. 24, 1968 and May 29, 1969.

Since Mr. Pierce became the SBA-TU Officer in the Southwest Region, he, from Feb. 24, 1971 through Feb. 21, 1973, has generated 164 searches of the TUSC data bank.

Attached to this letter are selected typical examples of search activity created by Mr. Pierce and his predecessor, Mr. Gipson. These examples reflect the work being done in the Southwest Region.

It is our understanding that the Technology Utilization Program of the SBA is recommended for termination at the end of the fiscal year. We have written this letter and cited these examples of the NASA-SBA interface to show that the small businessman is being served through the Technology Utilization Programs and that consideration should be given to increasing this service rather than terminating it.

Respectfully,



C. Henry Gold
Director

CHG:vd

Attachments

cc: Dr. Leon Hibbs
Herb Holley
Forrest Decker
S. Charles Pierce

The Speaker's Rooms
U. S. House of Representatives
Washington, D. C. 20515
February 26, 1973

Dr. C. Henry Gold, Director
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

Dear Dr. Gold:

Thank you very much for the information. It is exactly what we wanted to supplement what we had already obtained. We are writing Mr. Kleppe, the Administrator of the Small Business Administration, and Congressman Evins, Chairman of the Select Committee on Small Business, urging the retention of SBA's technology utilization program. We are expressing the hope that the program can be expanded instead of eliminated.

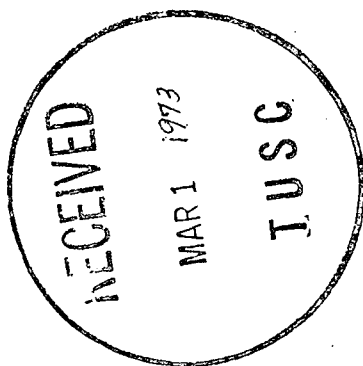
Our best wishes always.

Sincerely,



The Speaker

CA/wst



The Speaker's Rooms
U.S. House of Representatives
Washington, D. C. 20515
March 5, 1973

Dr. C. Henry Gold, Director
Technology Use Studies Center
Southeastern State College
Durant, Oklahoma 74701

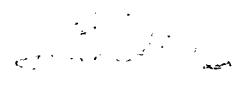
Dear Dr. Gold:

I am enclosing a copy of the reply I have received from Mr. Kleppe, the Administrator of the Small Business Administration, to my personal letter urging the retention of SBA's technology utilization program. I know you will be pleased to note that Mr. Kleppe plans to continue to use Mr. Pierce for the same kind of work he is doing whenever the requests for such services are received by any of the SBA offices in Region VI.

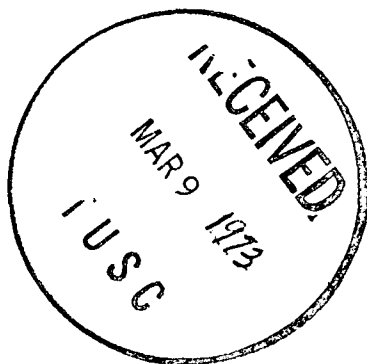
Again, thank you for contacting us and giving us an opportunity to check into this. We are so grateful that we can team up with you to serve our area.

Our continuing good wishes.

Sincerely,


The Speaker

CA/wst
Enclosure





U.S. GOVERNMENT
SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF THE ADMINISTRATOR

March 1, 1973

The Honorable Carl Albert
Speaker of the House of Representatives
Washington, D. C. 20515

Dear Carl:

I have noted with a great deal of interest your letter of February 26, for two specific reasons. One is that I am always pleased to hear from you regarding any subject, and the other is that this is the first time I have ever heard from anybody regarding our Technology Utilization Program.

Very candidly, Carl, the reason we have decided to eliminate the technology utilization section in our organizational structure is twofold:

1. There has not been enough demand and request for our assistance and, consequently, it has been necessary for those people to try to drum up work to justify their existence. (I have always taken a rather dim view of a Government program that has to go out and completely generate the activity for its worth.)
2. We have been miserably understaffed to do anything but token activity in this area. Now, with the additional personnel cutbacks we are faced with, it seems necessary for us to consolidate the work and activity of as many of our people as we can. For this reason, we are hopeful of having the ten people we had throughout the United States specifically assigned to technology utilization work into other areas that would fit their capability.

Having said the above, which gives a little background of the reasons for the decision to make better use of these ten people, we now get into the specific question of how best to use Charles Pierce. Charlie,

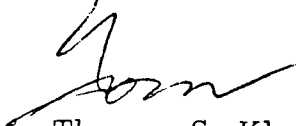
2

along with one other man, has done an outstanding job. Your letter and all of the enclosures thereto further vindicate this knowledge. It is our full plan and purpose, Carl, to continue to use Charlie for the same kind of work whenever the requests for such services are received by any of our offices in Region VI. We will also do this in other areas of the country where requests are received by us for such assistance, even though we will have dropped the TU business from our organizational structure.

In summary, I certainly agree with you that there are times and places when technology utilization is vital to small business. However, I do not like to pose an image to the public of having some expertise that we really don't have because of the unavailability of qualified personnel to really do the job on a national basis. Considering the budgetary restraints, I would not try to project at this time when sufficient, qualified personnel could be obtained to do this job as it rightfully should be done.

I hope you will communicate with us any time you have a question or a suggestion for our Agency. My very best, personal regards.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Tom', with a stylized flourish extending from the end.

Thomas S. Kleppe
Administrator